

# **Attachment 9**

## **Past Performance**

## **Past Performance**

### **Paso Robles Groundwater Basin**

### **Analysis of Groundwater Elevation Management Strategies**

### **San Luis Obispo County, California**

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For the two projects presented below regarding past performance no evaluations of performance were provided by DWR to the District or City.

#### **District Past Performance**

After submitting an application in response to a Proposition 50 Round 1 solicitation, the San Luis Obispo County Flood Control and Water Conservation District (District) was awarded an Integrated Regional Water Management (IRWM) Planning Grant for \$500,000 to conduct four (4) specific planning studies to enhance the San Luis Obispo County Region's IRWM Plan. The specific planning studies included a Regional Permitting Plan, Flood Management Plan, Data Enhancement Plan and Groundwater Banking Plan. The District entered into Grant Agreement No. 4600004505 with the Department of Water Resources (DWR). The District's contacts at DWR were Natalia Deardorff, followed by Maria Pang, and the work was managed by staff of the County Public Works Department. The Grant Completion Report, which includes a summary of the original and final scopes, schedules and budgets, is included as Exhibit A. The final versions of the four specific planning studies are available at:

<http://www.slocountywater.org/site/Frequent%20Downloads/Integrated%20Regional%20Water%20Management%20Plan/index.htm>

For the purposes of this attachment in demonstrating the capable performance of high quality work, managing funds and meeting deadlines for similar types of projects, a discussion regarding the Groundwater Banking Plan specific study follows.

#### **Project Management**

The District's Project Manager for the Groundwater Banking Plan (GBP) was Courtney Howard, P.E., who is a registered Civil Engineer. She will also serve as the Project Manager for the Analysis of Groundwater Elevation Management Strategies. To ensure a high-quality GBP was developed, Ms. Howard ensured that a consultant that was well qualified to conduct the work was selected by developing a detailed and comprehensive request for proposals (Exhibit B). Once the consultant was selected, Ms. Howard coordinated stakeholder meetings, provided comments on administrative drafts, participated in presentations and solicited public comment. Relevant documentation, including a sample meeting announcement, transmittal of comments, and presentations of these efforts is included as Exhibit C. The District also has other civil engineers on staff familiar with project management of water resources projects able to take over in the absence of Ms. Howard, and to provide project support, as well as an Accounting Division to provide financial management support.

#### **Grant Administration**

Ms. Howard was responsible for providing the District's grant administrator, Douglas Bird, with quarterly reports on the progress of developing the Groundwater Banking Plan, which were submitted to DWR consistently mid-month of each quarter with the required information on scope, schedule and budget. Ms.

Howard coordinated effectively with Mr. Bird, the District's accountant, Wendy Hall, and Ms. Deardorff. Exhibit D includes a sample of an email transmittal and the quarterly progress reports. While the Groundwater Banking Plan took approximately one year longer to complete than anticipated when the grant was executed (see Exhibit A), requests for time extensions were prompt and contained the appropriate information. Relevant correspondence is included as Exhibit E. The project was completed within budget (see Exhibit A).

### **Partner Past Performance**

After submitting, in partnership with the District<sup>1</sup>, an application in response to a Local Groundwater Assistance Program solicitation, the City of Paso Robles (City) was awarded a grant for \$208,000 to develop a Groundwater Management Plan (GMP) for the Paso Robles Groundwater Basin. The City entered into Agreement No. 4600008331 with DWR. The District's contacts at DWR were Maria Pang, followed by Jerry Snow, and the work was managed by staff of the City Public Works Department. The Grant Completion Report, which includes a summary of the original and final scopes, schedules and budgets, and grant completion letter from DWR are included as Exhibit G. The final Groundwater Management Plan is available at:

<http://www.slocountywater.org/site/Water%20Resources/Water%20Forum/pdf/201103%20-%20Paso%20Basin%20Final%20GMP.pdf>

For the purposes of this attachment in demonstrating the capable performance by partners of high quality work, managing funds and meeting deadlines for similar types of projects, a discussion regarding the development of the Groundwater Management Plan follows.

### **Project Management and Grant Administration**

The City's Project Manager and Grant Administrator during the development of the GMP was Mr. Christopher Alakel, who is a registered Civil Engineer. He will also serve as the District's contact for collaboration on the Analysis of Groundwater Elevation Management Strategies via membership on the GMP Steering Committee (Exhibit H). To ensure a high-quality GMP was developed, Mr. Alakel ensured that a consultant that was well qualified to conduct the work was selected by developing a detailed and comprehensive request for proposals (Exhibit I). Once the consultant was selected, Mr. Alakel coordinated stakeholder meetings, provided comments on administrative drafts and participated in presentations. Relevant documentation of these efforts, including a sample meeting announcement and transmittal of comments, is included as Exhibit J. The City also has an alternate member on the Steering Committee who is a hydrogeologist, able to take over in the absence of Mr. Alakel, and able to provide project support.

Mr. Alakel was responsible for developing the quarterly reports for the grant agreement, which were submitted to DWR consistently by mid-month of each quarter with the required information on scope, schedule and budget. Mr. Alakel coordinated effectively with the District and DWR. Exhibit K includes a sample of a quarterly progress report transmittal submitted to DWR. The project was completed within schedule and budget (see Exhibit G).

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<sup>1</sup> Since the District was submitting an application for a different basin in the county, the City agreed to act as the lead agency for the application and project. A Memorandum of Understanding (Exhibit F) formalizing the partnership was executed on December 15, 2009.

## **Exhibit A**



**Planning Grant Agreement No. 4600004505**  
**San Luis Obispo County Flood Control and Water Conservation District (District)**

**Final Report**

**Executive Summary**

The San Luis Obispo County Region's IRWM Planning Grant Project Work Plan guided the preparation of four sub-plans to be incorporated into the region's IRWM Plan:

Groundwater Banking Plan  
Regional Permitting Plan  
Data Enhancement Plan  
Flood Management Plan

For each sub-plan, a description of the work proposed to be completed in the original grant application, a description of work completed and how and why it differs from what was originally proposed, and a description of information gained by the region as a result of the project and how it will provide a better understanding, follows.

**Groundwater Banking Plan**

**Work Proposed and Completed:**

The following was the proposed scope of work for preparing a Groundwater Banking Plan for the Paso Robles Area Subbasin (of the Salinas Valley Groundwater Basin – Basin Number: 3-4.06); herein referred to as the “Paso Robles Groundwater Basin,” along with a discussion of if, how and why the actual work differed.

**Phase I - Supply Analysis**

The Supply Analysis was intended to determine the quantity of water that could be available for banking. Phase I work items were to include:

1. Review history of the excess water availability to both San Luis Obispo and Santa Barbara Counties. This was completed as planned.
2. Evaluate delivery capabilities of the existing SWP infrastructure. This evaluation was conducted based on the design of the infrastructure. The District was not able to coordinate a proper flow test and analysis during the project due to scheduling challenges between State Water Project (SWP) operations and maintenance activities.
3. Evaluate inter-agency contracts for the SWP and Nacimiento projects to determine what, if any, amendments would be needed. Inter-agency contract changes for Nacimiento were not evaluated due to a change in focus on utilizing State Water for banking; the Nacimiento Project was not far enough along to incorporate it into the analysis. Evaluation of the inter-agency contracts for the SWP was also not completed; a specific project that names specific parties would need to be identified prior to conducting the evaluation.
4. Prepare a Phase I – Supply Analysis progress report. A discussion of the Supply Analysis is included in the final Groundwater Banking Plan report.

## Phase II - Basin Modeling for Recharge and Extraction

The existing numerical basin model prepared for the District and completed in 2005 was to be used to identify several potential sites for recharge and extraction, and determine other potential impacts (both beneficial and negative) from the alternate sites. Phase II work items were to include:

1. Evaluate alternate recharge sites including:
  - a. River sites
  - b. Spreading basins
  - c. Well-injection sites
  - d. In-lieu pumping sites
2. Evaluate alternate extraction sites
3. Estimate the cost of infrastructure and operation for each of the alternates identified
4. Identification of funding alternatives and other financial considerations
5. Identify additional data needs for implementation efforts
6. Prepare a preliminary environmental review identifying CEQA requirements for plan implementation.
7. Prepare a Phase II – Basin Modeling progress report

All of the Phase II work items were completed, with a discussion of them included in the final Groundwater Banking Plan report.

## Phase III - Stakeholder Review

The Phase I and Phase II reports were to be reviewed with the Water Resources Advisory Committee, the State Water Project Contractors Committee, the Nacimiento Commission, the Central Coast Water Authority, related agencies and other stakeholders such as the County agricultural representatives to obtain their comments and recommendations.

All but the Nacimiento Commission (see Phase I – 3. discussion) were invited to regular North County Water Forum meetings during which significant deliverables for the Groundwater Banking Plan were presented and reviewed, and comments were collected.

## Phase IV - Final Report

A final report detailing all of the findings and conclusions, including stakeholders' review and recommendation was to be prepared, including:

1. Description of the banking-storage regimes
2. Alternate recharge sites, methods, infrastructure and costs (Capital and O&M)
3. Alternate extraction sites, methods, infrastructure and costs (Capital and O&M)
4. Options for improving and/or mitigating basin impacts
5. Monitoring needs for maintaining the banking program
6. Recommended steps for final selection and acquisition of recharge and extraction sites.
7. Identification of necessary inter-agency contracts.

8. Recommended steps for final compliance with the California Environmental Quality Act and the required Notice of Determination to carry-out the banking program.
9. Recommended funding mechanism and other financial considerations.
10. Stakeholder recommendations.

All of the work tasks for this phase were accomplished and incorporated into the final Groundwater Banking Plan report except for 7 and 9. The report focuses on determining whether or not banking in the Paso Robles Groundwater Basin is physically feasible rather than identification of potential banking partners, necessary contracts and funding.

#### Information Gained:

As a result of this sub-plan, the region now knows whether water banking in the Paso Robles Groundwater Basin is physically possible. The alternatives and potential costs and environmental concerns have also been explored. Banking and/or recharge as a way to both manage groundwater in the largest basin in the County and provide added reliability to water users throughout the region can now be included in the region's IRWM Plan. Depending on how the new guidelines will require modification of the region's adopted IRWM Plan, it is anticipated that the results of the sub-plan will be incorporated into the IRWM Plan's groundwater management goals and objectives, water management strategies, integration, implementation, impacts and benefits, technical analysis, financing, relation to local planning and stakeholder involvement sections.

#### Regional Permitting Plan

##### Work Proposed and Completed:

The following was the work item proposal for the Regional Permitting Plan component. As a point of clarification, "regional permits" are not "project specific" but cover a host of activities or projects within an area, such as a watershed.

Task 1: Review region's existing regional permitting efforts and identify improvement opportunities.

An initial survey letter was developed and sent to 32 Federal, State and Local agencies which either routinely grant environmental regulatory permits for projects occurring in the region, or which regularly implement projects subject to permitting requirements. Several of the permitting agencies have districts or regions that encompass areas beyond the study region (San Luis Obispo County) and consequently operate from offices that are located as much as 200 miles outside of the area.

Four current or proposed permit streamlining programs were identified:

1. The "Memorandum of Understanding" process managed by the California Department of Fish and Game pursuant to section 1600 of the California Fish and game Code
2. The Fisheries Restoration Grant Program managed by the California Department of Fish and Game, including programmatic federal endangered species

consultations and a Regional General Permit issued by the U.S. Army Corps of Engineers.

3. A proposed watershed-wide multiple agency permit streamlining program proposed for the San Luis Obispo Creek Watershed, with the City of San Luis Obispo and the San Luis Obispo County Flood Control and Water Conservation District acting as co-applicants. The agencies and statutes to be included in the watershed permit program include the U.S. Army Corps of Engineers (Clean Water Act), Regional Water Quality Control Board (Clean Water Act), National marine Fisheries Service (Endangered Species Act), U.S. Fish and Wildlife Service (Endangered Species Act), and the California Department of Fish and Game (California Fish and game Code)
4. A proposal by the Natural Resources Conservation Service to develop a permit streamlining program for small, environmentally beneficial conservation projects on private lands.

The response from environmental regulatory agencies was uniformly unenthusiastic. Agencies apparently interpreted the regional permitting concept as another in many attempts to implement permit streamlining, which are typically viewed as thinly veiled attempts to reduce the level of environmental protection provided by regulatory agencies. Consequently, no regulatory agency expressed any desire to participate with the District in developing a Regional Permitting Plan. Also, to a great degree many regulated agencies informally expressed agreement with the position taken by the regulatory community, that is, permit streamlining (in any form) is seen as a way to reduce environmental regulatory agency influence over public projects.

Given the uniform negative response to partnering in this effort, the District decided to adjust our approach by working on developing the Regional Permitting Plan that would respond to our own needs. The intent is that the plan could be used as a model by other agencies seeking to accomplish the goal of increasing the efficiency of the environmental regulatory process.

Task 2: Review and consider the EPA Compliance Incentive and Auditing Programs (see <http://www.epa.gov/compliance/incentives/>); meet with EPA representatives; develop conceptual strategies to integrate permitting efforts with EPA incentive programs.

EPA's Compliance and Incentive and Auditing Programs have essentially been replaced with an effort to encourage local agencies to develop Environmental Management Systems (EMS). The EPA definition of an EMS is "a set of processes and practices that enable an organization to reduce its environmental impacts and increase its operating efficiency". When applied to the environmental regulatory element of an agency's operations, the EMS would provide not only methods and practices that produce environmental benefits as a result of project implementation, but would also include measures to guarantee compliance, monitoring, and maintenance. Therefore, developing a framework for that portion of an EMS that relates to permitting will be an important aspect of the overall plan. Consequently, efforts under task 2 were focused on reviewing existing internal procedures with respect to EPA's EMS guidelines and identifying

opportunities for improvements. These efforts produced the Environmental Management System Review and Analysis (November 2008) which is included as a companion document to the Regional Permitting Plan.

The concept that is carried into the Regional Permitting Plan is that overall improvements in the environmental regulatory processes currently in place in California could benefit not only from changes in how regulatory agencies apply the statutes and regulations, but also from changes that regulated agencies can make in their project develop and implementation procedures. The Regional Permitting Plan then takes on two distinct parts: internal changes that project implementing (regulated) agencies should make and process changes that environmental regulatory agencies could make. Said another way, making meaningful improvements in the way environmental regulatory requirements are applied to public projects will require changes in process and approach from all agencies involved in bringing a project to fruition.

Task 3: Identify, evaluate and prioritize the locations of sensitive environmental resources for regional permits; meet with local environmental organizations

A parallel effort by the San Luis Obispo County Department of Planning and Building to consolidate and map all known information sources of sensitive environmental resources, together with similar information gathered for development of the San Luis Integrated Regional Water Management Plan has resulted in a wealth of information on this topic. The now wide-spread use of GIS mapping has made environmental information sharing among agencies at all levels of government a common practice. Working with a host of State and Federal agencies and groups, the District now has a set of GIS maps that describe a full range of environmental resources. This information is more than adequate to assist in prioritizing efforts towards regional permitting, whether the approach ultimately followed is taken on a regional, sub-regional, watershed or other basis. Maps can be viewed at:

[http://www.slocounty.ca.gov/planning/zoning/Map\\_Image\\_Download\\_Center.htm](http://www.slocounty.ca.gov/planning/zoning/Map_Image_Download_Center.htm)

Task 4: Prepare technical memorandum on permitting strategies for environmental resource agencies; conduct initial meetings with all environmental resource agencies to review objectives and strategies to integrate permitting strategies; request their recommendations on additional data needs for Data Gathering Plan.

As noted above, attempts to engage other agencies in the process were not initially successful. However, using existing information and agency guidance documents, the project was able to produce a set of appendices to the Environmental Management System Review and Analysis that accomplish the basic goals of Task 4, which was to provide documentation and background for the overall effort. The appendices include the following:

Agency Profiles describes the overall goals, background, jurisdiction, authorizing statutes, permits and certifications, permit submittal requirements, typical processing permit time, and enforcement approach for the seven agencies that issue the majority of environmental permits and authorizations in San Luis Obispo County.

The Existing Permit Process appendix provides detailed descriptions of the steps each permitting agency uses in order to implement their respective statutes and regulations. Flowcharts illustrating each agencies permit process were developed and are included.

The Existing Emergency Permit Process appendix, similar to the permit appendix, provides detailed descriptions of the steps each permitting agency uses in order to respond to emergencies, as required by their respective statutes and regulations. Flowcharts illustrating each agencies emergency permit process were developed and are included. Note that the District is independently using the information developed in this appendix to update our existing emergency guidance manuals.

The appendices also include summary information on three related EPA programs: Environmental Management Systems; the EPA Audit Policy; and the EPA Performance Track Program.

As part of the Environmental Management System Review and Analysis, the appendices incorporate an EMA Implementation Plan for the San Luis Obispo County Department of Public Works and a draft EMS Documentation Manual.

Task 5: Prepare integration and priorities for Regional Permitting Strategies based existing programs, EPA incentive programs, sensitive areas, and initial resource agency input.

The District will focus on the EPA's EMS program and capital project development and permitting as the priorities for implementation and development of the Regional Permitting Plan. The first priority for implementing the Regional Permitting Plan will be to improve the Department's internal environmental operations, as outlined in the EMS Implementation Plan. Concurrent with that effort, the Department will begin implementation of the first of four phases outlined in the Regional Permitting Plan. The four phases are:

Consistent Conditions: The District develops a comprehensive set of ideal conditions that are tested and acceptable to all the permitting agencies.

Consolidated Permits: The District works with the permitting agencies to allow for a single set of conditions under a consolidated permit that will apply to a project.

Single Agency Oversight: With consolidated permits will come the opportunity to designate a single agency to take the lead in overseeing permit compliance. Similar to CEQA's Lead Agency status, the Agency with the greatest responsibility or involvement would assume the role.

Audited Self Management: This final phase brings the Regional Permit to fruition. The District would be allowed to manage the conditioning and processing of projects within a region that had been recognized by the permitting agencies as having a comprehensive control mechanism in place.

Task 6: Prepare Stakeholder information materials; Conduct Stakeholder Meetings.

As noted above, after the initial agency contacts it was evident that no agency wished to become involved in the Regional Permitting Plan effort for a variety of reasons. It is evident that agency staffs consider “permit streamlining” as an effort to reduce the effectiveness of agency regulatory programs. Consequently, the District changed our approach to focus on developing a viable plan that can be implemented in phases, allowing the approach to be presented in a step-by-step fashion, building not only on the success of the previous step, but also relying on positive changes affected primarily by the efforts of the District. This approach does not require any environmental regulatory agency to consider changes in their procedures until after the District has demonstrated positive results. The first step in this effort to engage stakeholders will be the implementation of the EMS Implementation Plan; an effort that is entirely under the control of (and the responsibility of) the District. Implementation of the EMS will allow the District to show positive environmental results, thereby forming the first building block to a more efficient environmental regulatory process for public projects.

Task 7: Write Draft Plan.

The Draft Plan was completed in November Of 2008.

Task 8: Conduct follow up meetings with environmental resource agencies to review regional permitting strategies.

As discussed above under task 6, environmental resources agencies were not willing to become involved in “permit streamlining”. Consequently, the District’s approach is to implement those elements of the Plan that are under the control of the District, in order to demonstrate the benefits of the approach, including implementation of the EMS.

Task 9: Prepare Final Plan.

The final Plan is complete as of December 2008. The Regional Permit Program consists of two parts; the Regional Permit Plan (RPP) and the Environmental Management System (EMS).

Environmental Management System The EMS is an internal organization mechanism for managing the Department of Public Works. Through the implementation of standards identified in the ISO 14000 family, the Department can maintain a high level of environmental responsibility. The system defines how information is managed and communicated both internally and externally. The EMS tells the Department how to behave. This behavior sets the stage for improving the efficiency of permitting and project development. One of those improvements takes the form of a Regional Permit Plan.

According to the International Organization for Standardization, an EMS meeting the requirements of ISO 14001:2004 is a management tool enabling an organization of any size or type to:

- identify and control the environmental impact of its activities, products or services,
- improve its environmental performance continually, and
- implement a systematic approach to setting environmental objectives and targets, to achieving these and to demonstrating that they have been achieved.

Regional Permit Plan The Regional Permit Plan sets out an approach to managing the multitude of permits required by the Department for carrying out its projects. It begins with an orderly establishment of uniform conditions for projects in order to reduce processing time and increase consistency and effectiveness. It progresses towards a self-monitored permit using internet access for permitting agencies to monitor the compliance by the Department. Eventually, and this would likely require special legislation, the Department would issue its own permits, only to require auditing by the agencies normally entrusted with the permitting authority. The RPP is an outgrowth, or product of the EMS.

#### Information Gained:

The process of developing the Regional Permitting Plan initially produced two key closely related results: 1) environmental regulatory agencies are not amenable to new “permit streamlining” schemes, and 2), agencies seeking to improve the results of current environmental regulatory process need to lead from an environmental perspective. Therefore, the District has developed an approach to regional permitting that places the primary responsibility for its success in the hands of the District, rather than requiring regulatory agencies, which are consistently under pressure to produce more results with fewer resources. A key factor in the District’s approach is the overall goal to improve the results of current processes, rather than simply shorten time frames or reduce costs. The District’s perspective is that by working together the public agencies, both regulator and project proponents, should be able to leverage greater environmental benefits from the process, given the substantial investment in time and money currently invested. It is anticipated, however, that improved efficiencies can produce not only greater environmental benefits, but can do so while reducing both time and costs to the public.

The Regional permitting Plan will benefit the implementation of the IRWM by:

- Producing greater environmental benefits from the time and funding invested in projects that impact the aquatic environment
- Providing clear documentation on the results of projects, thereby developing a foundation for determining which projects are more likely to return the greatest environmental return.
- Establishing closer working relationships between regulating and implementing agencies, so that projects are more likely to produce a multitude of benefits in various environmental resource areas.
- Provide a means for demonstrating the success and value of IRWM projects to the public and decision makers.



- Potentially reducing the costs of regulatory permitting, allowing funds to be used to implement more or more beneficial projects
- Potentially reducing permitting time frames, thereby allowing agencies to respond more quickly to on-the-ground needs.

Information gained in developing this sub-plan will be especially beneficial for the technical analysis section of the region's IRWM Plan.

### Data Enhancement Plan

#### Work Proposed and Completed:

While the existing data gathering and management plan for the region is fairly extensive and has been used for several significant water resource evaluations, the San Luis Region is seeking to enhance the existing program and consequently included a sub-plan component in the proposal to do so, including the following work items:

1. Review existing data gathering programs and existing sources of information.
2. Review existing hydrogeological studies that identify additional data needs.
3. Review existing sensitive environmental areas for additional data needs
4. Communicate and meet with DWR, SWRCB, and RWQCB representatives for their recommendations on additional data needs and/or information sharing opportunities
5. Meet with local stakeholders and environmental resource agencies to identify data needs
6. Develop budget estimates for plan implementation and prioritize data needs
7. Write Draft Plan
8. Review Draft Plan with Stakeholders
9. Prepare Final Plan

All of the planned work items, with the exception of 6, 8 and 9 were completed; however, the method of stakeholder involvement was modified. Existing data programs run by the State agencies were researched rather than making direct contact. The District was not available to develop budget estimates, prioritize data needs, or provide the draft plan to stakeholders for review and comment prior to the grant agreement deadline. These tasks will be completed by mid-2009.

#### Information Gained:

Completion of the Data Enhancement Plan will significantly improve the Data Management section of the region's IRWM Plan as it has identified the data gaps in the region and a data network improvement plan with priorities and cost estimates will be developed. The planned improvements can also be incorporated into the regional priorities, implementation, technical analysis, financing, relation to local planning, and stakeholder involvement sections of the region's IRWM Plan.

## Flood Management Plan

As originally scoped and envisioned in the grant application, the primary focus of the Flood Management Plan (“Plan”) was to identify several of the most significant issues and constraints for flood control in the county of San Luis Obispo and to propose methods to address the challenges, including solicitation of stakeholder involvement in the process. As work in preparing the Plan progressed, the importance of the role of stakeholders and the need to involve them as early as possible in the process of planning and implementing flood control projects became increasingly apparent. The value of viewing the stakeholders as the primary audience of the Plan led to the decision to incorporate a community “readiness report card” as a central element of the report, and to change the title of the report to “Guide to Implementing Flood Control Projects.” It was felt that these measures would further enhance the appeal and usefulness of the document for the audience.

The following were the work items for the Flood Management Plan as originally scoped, along with a discussion of if, how and why the actual work differed, if applicable:

1. Review existing flood management reports and summarize findings
  - i. Previous studies, reports, Board of Supervisors policy statements and other pertinent documents relating to the topic of local flood management were gathered and referenced in the Plan. Portions of key documents were included in the Plan appendix.
2. Identify all challenges and constraints that currently hinder solutions to flood management problems and document those in a “constraints analysis.”
  - i. A chapter of the Plan was dedicated to a detailed discussion of the constraints associated with flood control project implementation. The constraints were grouped into topics of policy, funding, environmental permitting, right of way and stakeholder support, with references directing the reader to sources of additional information, some of which is included in the appendix.
3. Prioritize the constraints based on the degree to which they hinder solutions
  - i. Subsequent chapters of the Plan provided community specific discussion of constraints, including descriptions of flooding issues and proposed solutions for each community, with references for additional sources if information. These constraints were used as the basis for developing a “report card” for each community that was intended to evaluate and quantify each community’s current “readiness status” for implementing flood control projects benefiting the community. It was felt that the report card methodology would be a beneficial communication and outreach tool for stakeholders in the individual communities.
4. Conduct Stakeholder Meetings and meet with DWR to review constraints analysis and identify methods of overcoming constraints; document findings.
  - i. In the early phases of Plan preparation, District staff participated in a flood preparedness forum with stakeholders in one of the target communities and lessons learned in preparing for the meeting and responding to questions and comments from the public during the meeting were used in the preparation of the Plan report. Since the forum, there have been

several public meetings with advisory groups discussing flooding and drainage issues for three of the target communities. Experience in coordinating with the stakeholders in these meetings was used in formatting and preparing the final draft of the report. In addition, questions and input from the public and advisory group members were used to create a detailed list of “frequently asked questions” (FAQ’s) which have been grouped into various categories including policy, funding, environmental constraints and emergency response, and is included in the plan appendix.

5. Write Draft Plan with stakeholders as the audience – not technical professionals or government officials.
  - i. A primary focus of the Plan was to identify the need for, and encourage the involvement of, stakeholders (i.e. those individual citizens and communities affected by flooding problems) in the process of implementing flood control projects, which is viewed as being essential to the process. Therefore, the target audience for the report was the stakeholders themselves, and the plan was drafted in a way that would provide guidance to them and encourage their involvement in the process. Development and inclusion of a “readiness report card” for each community was a result of this emphasis.
6. Review draft plan with stakeholders and DWR
  - i. In recent years, San Luis Obispo County Flood Control District staff conducted numerous informational and communication meetings with many of the community representatives and agencies of six target communities during the process of preparing detailed Drainage and Flood Control studies for each of the communities. The final reports were adopted by the Board of Supervisors in 2004, and the preparation of the current Plan was intended to provide a means to continue the outreach and communication efforts aimed at involving the stakeholders. While the Plan reflects input and experience gained from public forums and advisory group meetings held during the time the Plan was prepared, District staff was not able to coordinate formal review of the draft Plan by stakeholders or DWR.
7. Prepare Final Plan with stakeholders as audience
  - i. The District was not able to provide the draft plan to stakeholders for review and comment prior to the grant agreement deadline. It is intended to be made available to stakeholders beginning in the winter of 2009.

All of the planned work items, with the exception of 6 and 7, were completed.

#### Information Gained:

Completion of the Flood Management Plan (“Guide to Implementing Flood Control Projects”) has helped the region understand the constraints to solving flood control problems and opportunities for integrating additional benefits to diversify financing options and most especially steps for outreach and involvement of stakeholders. The Flood Management Plan will be incorporated into the flood management goals and objectives, financing and relation to local planning sections of the region’s IRWM Plan.

**Reports and/or Products**

The Flood Management Plan, Regional Permitting Plan and Data Enhancement Plan are attached. The Groundwater Banking Plan was submitted previously.

**Schedule**

The final project schedule is attached, showing actual progress versus planned progress.

**Budget**

The project budget showing actual expenses as of December 16, 2008, versus original cost estimates is attached. The final actual expenses will be provided with the final invoice as soon as the information is available to the District.

ID	Task Name	Start	Finish
1	<b>Groundwater Banking Plan (Original)</b>	<b>Mon 1/2/06</b>	<b>Wed 3/28/07</b>
2	Supply Analysis	Mon 1/2/06	Sun 4/2/06
3	Basin Modeling	Sun 4/2/06	Thu 12/28/06
4	Stakeholder Review	Thu 12/28/06	Sat 1/27/07
5	Final Report	Sat 1/27/07	Wed 3/28/07
6	Plan Adoption	Wed 3/28/07	Wed 3/28/07
7			
8	<b>Groundwater Banking Plan (Actual)</b>	<b>Mon 1/2/06</b>	<b>Wed 4/30/08</b>
9	Stakeholder Review	Tue 1/31/06	Wed 1/2/08
10	Supply Analysis	Mon 1/2/06	Fri 12/28/07
11	Basin Modeling	Thu 6/8/06	Mon 10/1/07
12	Final Report	Fri 2/1/08	Mon 4/21/08
13	Plan Adoption	Wed 4/30/08	Wed 4/30/08
14			
15	<b>Regional Permitting Plan (Original)</b>	<b>Mon 1/2/06</b>	<b>Fri 1/19/07</b>
16	Review Existing Efforts	Mon 1/2/06	Fri 1/27/06
17	Review EPA Programs	Mon 1/2/06	Fri 1/27/06
18	Identify Sensitive Locations	Mon 1/30/06	Fri 5/5/06
19	Prepare Technical Memo	Mon 5/8/06	Fri 6/30/06
20	Prepare Integration Priorities	Mon 7/3/06	Fri 8/25/06
21	Prepare Stakeholder Info Bulletins	Mon 8/28/06	Fri 9/22/06
22	Write Draft Plan	Mon 9/25/06	Fri 10/20/06
23	Follow-up Meetings	Mon 10/23/06	Fri 12/15/06
24	Prepare Final Plan	Mon 12/18/06	Fri 1/19/07
25	Plan Adoption	Fri 1/19/07	Fri 1/19/07
26			
27	<b>Regional Permitting Plan (Actual)</b>	<b>Mon 1/2/06</b>	<b>Fri 1/16/09</b>
28	Review Existing Efforts	Mon 1/2/06	Fri 6/30/06
29	Review EPA Programs	Thu 6/1/06	Wed 11/15/06
30	Identify Sensitive Locations	Thu 11/16/06	Wed 12/27/06
31	Prepare Technical Memo	Thu 12/28/06	Wed 7/18/07
32	Prepare Integration Priorities	Thu 7/19/07	Wed 9/12/07
33	Prepare Stakeholder Info Bulletins	Thu 9/13/07	Thu 9/13/07
34	Write Draft Plan	Fri 9/14/07	Thu 10/2/08
35	Follow-up Meetings	Fri 10/3/08	Fri 10/3/08
36	Prepare Final Plan	Mon 10/6/08	Fri 12/5/08
37	Plan Adoption	Fri 1/16/09	Fri 1/16/09

ID	Task Name	Start	Finish	2005				2006				2007				2008				2009				2010		
				Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
39	<b>Data Enhancement Plan (Original)</b>	<b>Mon 1/2/06</b>	<b>Tue 6/26/07</b>																							
40	Review Existing Programs	Mon 1/2/06	Wed 11/1/06																							
41	Review Existing Studies	Sat 7/1/06	Tue 10/31/06																							
42	Review Existing Sensitive Locations	Wed 11/1/06	Sun 12/31/06																							
43	Meet w/ DWR, SWRCB, RWQCB	Sun 10/29/06	Sat 1/27/07																							
44	Meet Local Stakeholders	Sat 1/27/07	Mon 2/26/07																							
45	Develop budget and Priorities	Mon 2/26/07	Wed 3/28/07																							
46	Write Draft Plan	Wed 3/28/07	Fri 4/27/07																							
47	Review Plan with Stakeholders	Fri 4/27/07	Sun 5/27/07																							
48	Prepare Final Plan	Sun 5/27/07	Tue 6/26/07																							
49	Plan Adoption	Tue 6/26/07	Tue 6/26/07																							
50																										
51	<b>Data Enhancement Plan (Actual)</b>	<b>Sat 7/1/06</b>	<b>Fri 1/9/09</b>																							
52	Review Existing Programs	Sat 7/1/06	Wed 1/2/08																							
53	Review Existing Studies	Fri 9/1/06	Mon 1/14/08																							
54	Review Existing Sensitive Locations	Wed 11/1/06	Sat 3/15/08																							
55	Write Draft Plan	Sat 3/15/08	Fri 1/9/09																							
56	Meet Local Stakeholders	Sat 7/1/06	Sun 7/20/08																							
57																										
58	<b>Flood Management Plan (Original)</b>	<b>Sun 1/1/06</b>	<b>Sat 10/28/06</b>																							
59	Review Existing Flood Reports	Sun 1/1/06	Tue 1/31/06																							
60	Identify Constraints	Tue 1/31/06	Thu 3/2/06																							
61	Prioritize Constraints	Thu 3/2/06	Sat 4/1/06																							
62	Conduct Stakeholder & DWR meetings	Sat 4/1/06	Wed 5/31/06																							
63	Write Draft Plan	Wed 5/31/06	Fri 6/30/06																							
64	Review Plan with Stakeholders	Fri 6/30/06	Thu 9/28/06																							
65	Prepare Final Plan	Thu 9/28/06	Sat 10/28/06																							
66	Plan Adoption	Sat 10/28/06	Sat 10/28/06																							
67																										
68	<b>Flood Management Plan (Actual)</b>	<b>Wed 10/18/06</b>	<b>Tue 12/30/08</b>																							
69	Review Existing Flood Reports	Wed 10/18/06	Wed 1/3/07																							
70	Identify Constraints	Thu 1/4/07	Wed 2/14/07																							
71	Prioritize Constraints	Wed 2/14/07	Thu 5/3/07																							
72	Conduct Stakeholder & DWR meetings	Wed 5/16/07	Mon 10/15/07																							
73	Write Draft Plan	Wed 10/17/07	Wed 9/17/08																							
74	Review Plan with Stakeholders	Wed 9/17/08	Fri 10/17/08																							
75	Prepare Final Plan	Fri 10/17/08	Mon 12/29/08																							
76	Plan Adoption	Tue 12/30/08	Tue 12/30/08																							

**Proposition 50 Grant Program Budget Tracking**

WBS	Description	Revised Grant Amount as of 12/31/06	Revised District Match as of 12/31/06	Total Authorized Grant Amount		Previous Balance (FY 2005-2006)	FY 05/06 Hours	Previous Balance (FY 2006/2007)	FY 06/07 Hours	Previous Balance (FY 2007/2008)	FY 07/08 Hours		YTD thru 12/16/08	YTD Hours		Total Costs	Total Hours
<b>300323</b>	<b>Groundwater Banking Plan</b>																
300323.50.01	Supply Analysis	\$15,000	\$3,676	\$18,676		\$928.58	10.0	\$6,217.94	65.50	\$642.37	5.00		\$0.00	0.00		\$7,788.89	80.50
300323.50.02	Basin Modeling	\$162,500	\$39,824	\$202,324		\$3,714.32	40.5	\$85,524.91	63.00	\$127,348.14	18.50		\$0.00	0.00		\$216,587.37	122.00
300323.50.03	Stakeholder Review	\$44,000	\$10,783	\$54,783		\$6,964.36	76.0	\$33,023.57	15.00	\$20,315.81	20.50		\$0.00	0.00		\$60,303.74	111.50
300323.50.04	Final Report	\$12,000	\$2,941	\$14,941		\$0.00	0.0	\$3,425.57	0.00	\$15,604.56	11.00		\$0.00	0.00		\$19,030.13	11.00
300323.50.05	Plan Adoption	\$20,000	\$4,901	\$24,901		\$0.00	0.0	\$0.00	0.00	\$704.75	5.00		\$225.58	2.00		\$930.33	7.00
300323.50.06	Project Management	\$7,500	\$22,500	\$30,000		\$6,964.35	76.5	\$7,975.19	79.50	\$5,236.11	51.00		\$902.31	8.00		\$21,077.96	215.00
	<b>Sub-Total</b>	<b>\$261,000</b>	<b>\$84,625</b>	<b>\$345,625</b>		<b>\$18,571.61</b>	<b>203.0</b>	<b>\$136,167.18</b>	<b>223.00</b>	<b>\$169,851.74</b>	<b>111.00</b>		<b>\$1,127.89</b>	<b>10.00</b>		<b>\$325,718.42</b>	<b>547.00</b>
<b>300324</b>	<b>Regional Permitting Plan</b>																
300324.50.01	Review Existing Efforts	\$5,000	\$1,250	\$6,250		\$1,412.06	12.0	\$124.81	1.00	\$8,602.88	0.00		\$0.00	0.00		\$10,139.75	13.00
300324.50.02	Review EPA Program	\$15,000	\$3,750	\$18,750		\$0.00	0.0	\$873.68	7.00	\$4,859.80	0.00		\$0.00	0.00		\$5,733.48	7.00
300324.50.03	Identify Sensitive Locations	\$10,000	\$2,500	\$12,500		\$0.00	0.0	\$124.81	1.00	\$14,165.80	0.00		\$0.00	0.00		\$14,290.61	1.00
300324.50.04	Prepare Technical Memo	\$10,000	\$2,500	\$12,500		\$0.00	0.0	\$8,674.39	69.50	\$29,604.08	41.50		\$0.00	0.00		\$38,278.47	111.00
300324.50.05	Prepare Integration Priorities	\$20,000	\$5,000	\$25,000		\$0.00	0.0	\$0.00	0.00	\$3,102.00	0.00		\$0.00	0.00		\$3,102.00	0.00
300324.50.06	Prepare Stakeholder Info Bulletins	\$8,500	\$6,508	\$15,008		\$0.00	0.0	\$0.00	0.00	\$14,754.73	1.00		\$0.00	0.00		\$14,754.73	1.00
300324.50.07	Write Draft Plan	\$20,000	\$5,000	\$25,000		\$0.00	0.0	\$0.00	0.00	\$13,499.47	10.00		\$0.00	0.00		\$13,499.47	10.00
300324.50.08	Follow-up Meetings	\$7,500	\$1,875	\$9,375		\$0.00	0.0	\$0.00	0.00	\$6,266.04	0.00		\$3,030.00	0.00		\$9,296.04	0.00
300324.50.09	Prepare Final Plan	\$9,000	\$3,492	\$12,492		\$0.00	0.0	\$0.00	0.00	\$22,064.93	17.50		\$9,684.52	6.00		\$31,749.45	23.50
300324.50.10	Plan Adoption	\$4,000	\$1,000	\$5,000		\$0.00	0.0	\$0.00	0.00	\$0.00	0.00		\$0.00	0.00		\$0.00	0.00
300324.50.11	Project Management and Administration (Including Quarterly Reports)	\$2,500	\$10,000	\$12,500		\$0.00	0.0	\$124.81	1.00	\$0.00	0.00		\$0.00	0.00		\$124.81	1.00
	<b>Sub -Total</b>	<b>\$111,500</b>	<b>\$42,875</b>	<b>\$154,375</b>		<b>\$1,412.06</b>	<b>12.0</b>	<b>\$9,922.50</b>	<b>79.50</b>	<b>\$116,919.73</b>	<b>70.00</b>		<b>\$12,714.52</b>	<b>6.00</b>		<b>\$140,968.81</b>	<b>167.50</b>

300325	Data Enhancement Plan															
300325.50.01	Review Existing Programs	\$7,500	\$2,500	\$10,000		\$1,417.65	25.0	\$1,456.25	21.50	\$24,119.02	9.50		\$0.00	0.00	\$26,992.92	56.00
300325.50.02	Review Existing Studies	\$15,000	\$5,000	\$20,000		\$567.10	10.0	\$745.06	11.00	\$10,358.62	147.00		\$1,680.99	22.00	\$13,351.77	190.00
300325.50.03	Review Existing Sensitive Locations	\$15,000	\$5,000	\$20,000		\$0.00	0.0	\$0.00	0.00	\$4,703.65	66.75		\$3,782.23	49.50	\$8,485.88	116.25
300325.50.04	Meet w/DWR, SWRCB, RWQCB	\$11,000	\$4,000	\$15,000		\$0.00	0.0	\$0.00	0.00	\$0.00	0.00		\$0.00	0.00	\$0.00	0.00
300325.50.05	Meet Local Stakeholders	\$7,500	\$2,500	\$10,000		\$0.00	0.0	\$0.00	0.00	\$880.84	12.50		\$0.00	0.00	\$880.84	12.50
300325.50.06	Develop Budget and Priorities	\$7,500	\$2,500	\$10,000		\$0.00	0.0	\$67.73	1.00	\$0.00	0.00		\$0.00	0.00	\$67.73	1.00
300325.50.07	Write Draft Plan	\$3,750	\$1,250	\$5,000		\$0.00	0.0	\$440.26	6.50	\$1,162.71	16.50		\$7,086.89	92.75	\$8,689.86	115.75
300325.50.08	Review Plan with Stakeholders	\$1,500	\$500	\$2,000		\$0.00	0.0	\$0.00	0.00	\$0.00	0.00		\$0.00	0.00	\$0.00	0.00
300325.50.09	Prepare Final Plan	\$1,500	\$500	\$2,000		\$0.00	0.0	\$0.00	0.00	\$0.00	0.00		\$0.00	0.00	\$0.00	0.00
300325.50.10	Plan Adoption	\$750	\$250	\$1,000		\$0.00	0.0	\$0.00	0.00	\$0.00	0.00		\$0.00	0.00	\$0.00	0.00
300325.50.11	Project Management and Administration (Including Quarterly Reports)	\$1,500	\$3,500	\$5,000		\$141.75	2.5	\$3,287.56	40.00	\$1,908.52	20.00		\$2,368.57	21.00	\$7,706.40	83.50
	Sub-Total	\$72,500	\$27,500	\$100,000		\$2,126.50	37.5	\$5,996.86	80.00	\$43,133.36	272.25		\$14,918.68	185.25	\$66,175.40	575.00
300326	Flood Management Plan															
300326.50.01	Review Existing Flood Reports	\$5,000	\$2,500	\$7,500		\$0.00	0.0	\$3,906.54	61.00	\$125.80	2.00		\$20.76	0.00	\$4,053.10	63.00
300326.50.02	Identify Constraints	\$7,500	\$2,500	\$10,000		\$0.00	0.0	\$1,186.28	12.00	\$321.55	3.00		\$0.00	0.00	\$1,507.83	15.00
300326.50.03	Prioritize Constraints	\$7,000	\$3,000	\$10,000		\$0.00	0.0	\$0.00	0.00	\$1,929.28	18.00		\$0.00	0.00	\$1,929.28	18.00
300326.50.04	Conduct Stakeholder & DWR Meetings	\$8,000	\$2,000	\$10,000		\$0.00	0.0	\$88.99	4.00	\$0.00	0.00		\$0.00	0.00	\$88.99	4.00
300326.50.05	Write Draft Plan	\$15,000	\$5,000	\$20,000		\$0.00	0.0	\$2,848.58	29.00	\$14,746.37	135.50		\$2,739.42	19.00	\$20,334.37	183.50
300326.50.06	Review Plan with Stakeholders	\$4,000	\$1,000	\$5,000		\$0.00	0.0	\$0.00	0.00	\$0.00	0.00		\$0.00	0.00	\$0.00	0.00
300326.50.07	Prepare Final Plan	\$6,750	\$1,250	\$8,000		\$0.00	0.0	\$0.00	0.00	\$0.00	0.00		\$0.00	0.00	\$0.00	0.00
300326.50.08	Plan Adoption	\$750	\$250	\$1,000		\$0.00	0.0	\$0.00	0.00	\$0.00	0.00		\$0.00	0.00	\$0.00	0.00
300326.50.09	Project Management and Administration (Including Quarterly Reports)	\$1,000	\$2,500	\$3,500		\$0.00	0.0	\$0.00	0.00	\$1,071.83	10.00		\$0.00	0.00	\$1,071.83	10.00
	Sub-Total	\$55,000	\$20,000	\$75,000		\$0.00	0.0	\$8,030.39	106.00	\$18,194.83	168.50		\$2,760.18	19.00	\$28,985.40	293.50
	General Plan Efforts					\$10,505.59	47.5	\$0.00	0.00	\$0.00	0.00		\$0.00	0.00	\$10,505.59	47.50
	Total Grant Amount	\$500,000	\$175,000	\$675,000		\$32,615.76	300.0	\$160,116.93	488.50	\$348,099.66	621.75		\$31,521.27	220.25	\$572,353.62	1,630.50



## **Exhibit B**



# COUNTY OF SAN LUIS OBISPO

## DEPARTMENT OF GENERAL SERVICES

COUNTY GOVERNMENT CENTER • SAN LUIS OBISPO, CALIFORNIA 93408 • (805) 781-5200

DUANE P LEIB, DIRECTOR

### **REQUEST FOR PROPOSAL PS- #929 PASO ROBLES GROUNDWATER BASIN WATER BANKING FEASIBILITY STUDY**

July 18, 2006

The San Luis Obispo County Flood Control and Water Conservation District (District) is currently soliciting proposals for professional services to complete a feasibility study for banking water in the Paso Robles Groundwater Basin by December 3, 2007.

Each proposal shall specify each and every item as set forth in the attached specifications. Any and all exceptions must be clearly stated in the proposal. Failure to set forth any item in the specifications without taking exception, may be grounds for rejection. The District reserves the right to reject all proposals and to waive any informalities.

If your firm is interested and qualified, please submit five [5] copies of your proposal by 5:00 PM on August 15, 2006 to:

County of San Luis Obispo  
Jack Markey, Central Services  
1087 Santa Rosa Street  
San Luis Obispo, CA 93408

If you have any questions about the proposal process, please contact me. For technical questions and information contact Courtney Howard at (805) 781-1016.

JACK MARKEY  
Supervising Buyer - Central Services Division  
jmarkey@co.slo.ca.us

**PROPOSAL SUBMITTAL AND SELECTION**

1. All proposals, consisting of five (5) copies, must be received by mail, recognized carrier, or hand delivered no later than 5:00 PM on August 15, 2006. Late proposals will not be considered.
2. All correspondence should be directed to:  
  

San Luis Obispo County  
Department of General Services  
1087 Santa Rosa Street  
San Luis Obispo, CA 93408  
ATTENTION: JACK MARKEY  
Telephone: 805-781-5900
3. Costs of preparation of proposals will be borne by the proposer.
4. It is preferred that all proposals be submitted on recycled paper, printed on two sides.
5. Selection of qualified proposers will be by an approved District procedure for awarding professional contracts.
6. This request does not constitute an offer of employment or to contract for services.
7. The District reserves the option to reject any or all proposals, wholly or in part, received by reason of this request.
8. The District reserves the option to retain all proposals, whether selected or rejected.
9. All proposals shall remain firm for ninety (90) days following closing date for receipt of proposals.
10. The District reserves the right to award the contract to the firm who presents the proposal which in the judgment of the District, best accomplishes the desired results, and shall include, but not be limited to a consideration of the professional service fee.
11. Selection will be made on the basis of the proposals as submitted. The Selection Committee may deem it necessary to interview applicants. The District retains the right to interview applicants as part of the selection process.
12. The proceedings of the Selection Committee are confidential. Members of the Selection Committee are not to be contacted by the proposers.

## **PROPOSAL FORMAT**

A qualifying proposal must address all of the following points:

1.     Project Title
2.     Applicant or Firm Name
3.     Firm Qualifications (50%)
  - a.     Type of organization, size, professional registration and affiliations.
  - b.     (20%) Names and qualifications of personnel to be assigned to this project.
  - c.     (20%) Outline of recent projects completed that are directly related to this project, including references. Consultant is required to demonstrate specific design and project expertise related to groundwater banking, hydrogeology and the requirements of the Scope of Work.
  - d.     (10%) Qualifications of consultants, subcontractors, or joint venture firm, if appropriate.
  - e.     Client references from recent related projects, including name, address and phone number of individual to contact for referral.
4.     Understanding of and Approach to the Project (50%)
  - a.     (35%) Summary of approach to be taken, including communication efforts, incorporation of stakeholder input, and task completion schedule. The District has secured funding through a Planning Grant Agreement with the State of California through the Integrated Regional Water Management Program and Proposition 50. Since the Agreement expires on January 2, 2008, the required completion date for the Final Report is December 3, 2007.
  - b.     (10%) Description of the organization and staffing to be used for the project.
  - c.     (5%) Indication of information and participation the proposer will require from District staff.
  - d.     Indication of time frame necessary to complete the tasks once a Notice to Proceed is issued.
5.     Fees and Insurance
  - a.     Propose total fixed fees to complete project as described under Scope of Work.
  - b.     The selected Consultant will be required to provide insurance coverage, as shown in Sections 7 and 9 of the attached consultant agreement. This amount of insurance coverage shall be reflected in your estimated professional fee.

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- c. The Consultant shall provide within five (5) days after the Notice of Award is issued a certificate of liability insurance naming the District and its employees and officers as additionally named insured. This shall be maintained in full force and effect for the duration of the contract and must be in an amount and format satisfactory to the District.
- d. The selected Consultant will need to indemnify the District as included in Section 8 and 9 of the attached consultant agreement.

6. Agreement for Engineering Consulting Services

Upon selection, the consultant must provide a completed Agreement for Engineering Consulting Services (see attached).

7. Background

The San Luis Obispo County Flood Control and Water Conservation District (District) is currently soliciting proposals for professional services to complete a feasibility study for banking water in the Paso Robles Groundwater Basin (Basin).

With the future implementation of the Lake Nacimiento Water Project, Lopez Lake water delivery in the 1960's, and State Water Project water delivery in 1990's, the District's attention is turning from major regional water resource project implementation to water resource planning, including conjunctive use, groundwater management, and water supply reliability enhancement opportunities on a regional basis. The most promising effort to consider in support of water resource management is planning for a groundwater banking program in northern San Luis Obispo County, the sub-region where the Central Coast Aqueduct of the State Water Project enters into the region.

The District has 16,553 acre-feet of un-subscribed water available from its State Water Project Table A allocation of 25,000 acre-feet per year. On average, the State Water Project delivers about 75% of full Table A allocations, meaning, on average, about 12,400 acre-feet per year is not utilized. Attached is a map showing the location of the Basin and the State Water Project Coastal Branch infrastructure. Unfortunately, the District does not have capacity in the Polonio Pass Water Treatment Plant or subsequent infrastructure for the treatment and conveyance of the un-subscribed water.

The Nacimiento Water Project is currently being designed to handle 15,750 acre feet per year delivery capacity, with 6,120 acre feet per year remaining un-subscribed as District-owned contingency.

8. Purpose of the Feasibility Study

The purpose of the feasibility study is to determine if the Basin is a good candidate for a groundwater banking program in order to improve water supply reliability and

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preserve excess allocations of water, primarily State Water since it is currently being delivered. Two critical resources were developed over the past several years which can be used in evaluating the feasibility of banking water in the Basin. Phase 1 of the Paso Robles Groundwater Basin Study investigated and quantified the hydrogeologic conditions of the Basin and was completed in 2002. Phase 2, a numerical groundwater flow model of the Basin, was completed in 2005. These reports are available for reference at [www.slocountywater.org/reports](http://www.slocountywater.org/reports).

The District anticipates that the study will address the following questions:

- Given the Basin's characteristics and the physical locations of the existing water infrastructure, what are the possible alternatives available to bank water in this Basin?
- Is it physically possible to bank the water in the Paso Robles groundwater basin?
- How much can be stored?
- Will the water flow out of the area before it is extracted? What is the impact of aquifer flow rates on a banking program?
- What is the impact of imported water quality on the basin and subsequent uses of the groundwater/banked water?
- What are the treatment requirements for the alternatives assessed?
- Who might benefit/be harmed from/by each alternative and how/to what extent would they benefit/be harmed?
- How can impacts be mitigated?
- What are the potential environmental impacts associated with groundwater banking programs?
- Who might participate and how would the program be paid for?
- Is the cost worth the benefit?
- What is the level of confidence in the results of the feasibility analysis?
- What is the risk of a banking program leading to basin adjudication/water rights disputes?
- What important contractual issues regarding banking/extraction are considerations to such a program?

9. Scope of Work

A. Preliminary Engineering

Review Phase I and II of the Paso Robles Groundwater Basin Study, and gather and review other information available in order to develop initial concepts of potentially feasible groundwater banking programs, including methods, sites and participants, to analyze. Assess the reliability and sufficiency of the information/data available and develop a refined approach to the feasibility analysis. Summarize findings in a Preliminary Engineering Technical Memorandum. Review the Preliminary Engineering Technical Memorandum with the Groundwater Banking Sub-Committee and address their input as detailed in D. below.

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**B. Feasibility Analysis and Computer Model Progress Report**

Utilizing Phase I and II of the Paso Robles Groundwater Basin Study and any other applicable information, analyze feasibility (i.e. physical feasibility, cost/benefit, impacts analysis, etc.) of several potential sites and programs for banking water in the Basin as detailed below.

1. Evaluate potential recharge sites and methods such as:
  - a. River sites
  - b. Spreading basins
  - c. Well-injection sites
  - d. In-lieu pumping sites
2. Evaluate potential extraction sites and methods
3. Determine potential impacts (both beneficial and negative) from the potential sites, including an assessment of potential water losses
4. Estimate the cost of infrastructure and cost of operation for each of the potential sites/methods identified
5. Identify and evaluate potential participants/banking partners
6. Identify and evaluate funding alternatives and other financial considerations
7. Identify additional data needs (data gaps) for implementation efforts
8. Describe environmental considerations by identifying CEQA requirements for plan implementation

Run the computer model of the Basin for the three most feasible sites and programs to refine analysis and recommendations. Prepare a Progress Report summarizing sites and programs analyzed, preliminary findings and approach to the final report. Review the Progress Report with the Groundwater Banking Sub-Committee and address their input as detailed in D. below.

**C. Draft Final Report and Final Report**

Prepare a Draft Final Report detailing all of the findings and conclusions. Include stakeholders' reviews and recommendations in a Final Report after reviewing the Draft Final Report with them as detailed in D. below. The Draft Final Report and Final Report should include:

1. Descriptions of the banking/storage regimes
2. Potential recharge sites, methods, infrastructure and costs (Capital and O&M)
3. Potential extraction sites, methods, infrastructure and costs (Capital and O&M)
4. Options for improving and/or mitigating basin impacts
5. Monitoring needs for maintaining the banking program
6. Recommended steps for implementation of the banking program, including final selection and acquisition of recharge and extraction sites as applicable
7. Identification of necessary inter-agency contracts
8. Recommended steps for final compliance with the California Environmental Quality Act and the required Notice of Determination to carry-out the banking program

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9. Recommended funding mechanism, funding options and other financial considerations
10. Stakeholder recommendations
11. A discussion of critical factors and the potential for future feasibility if a groundwater banking program is not currently feasible

D. Stakeholder Review/Meetings

1. Review the Preliminary Engineering Technical Memorandum, Progress Report, Draft Final Report and any findings at six (6) meetings (two (2) meetings per deliverable) with the Groundwater Banking Sub-Committee of the Water Resources Advisory Committee, the North County Water Forum, the State Water Project Sub-Contractors Committee, the Central Coast Water Authority, related agencies and other stakeholders such as San Luis Obispo County agricultural representatives. Collectively called the "Groundwater Banking Sub-Committee", these groups are invited every 1 to 3 months to a meeting on Groundwater Banking in Templeton, CA, on the first Thursday of the month from 5:00 to 6:30 pm. Provide the memorandum/reports at least two weeks prior to the review meeting and then follow-up at the next month's meeting in order to discuss the approach to addressing their input prior to development of the next deliverable.
2. Review the Draft Final Report and any findings with the Water Resources Advisory Committee (meets on the first Wednesday of every month except July and August from 1:30 to 3:30 pm), the Nacimiento Water Commission (meets on the third Thursday of every month in Templeton, CA from 4:00 to 5:00 pm), and the Shandon Advisory Council (meets on the first Wednesday of every month at 7:00 pm). Provide the Draft Final Report at least two weeks prior to the review meetings and then follow-up at the next month's meetings (six (6) meetings total; two (2) meetings per stakeholder group) in order to discuss the approach to addressing their input prior to development of the next deliverable.
3. Obtain and address recommendations of the affected committees and commissions



Proposal Format  
Page Six

10. Payment Schedule

The District has secured funding through a planning grant from the State of California Integrated Regional Water Management Program and Proposition 50. Fees shall be paid according to the following progress schedule:

	Progress Point	Progress Payment
A	Issuance of Technical Memorandum	20%
B	Issuance of Progress Report	30%
C.1	Issuance of Draft Final Report	30%
C.2	Issuance of Final Report	20%

No partial payments or incremental payments other than those stated herein will be allowed.

11. Accomplishment Schedule

The required completion date for the Final Report is December 3, 2007. Proposals shall include a task completion schedule, including review periods and stakeholder review meetings following the Technical Memorandum, Progress Report and Draft Final Report Issuance progress points.

12. District Furnished Information

Hardcopy of Paso Robles Groundwater Basin Study – Phase I  
Electronic Copy of Model from Paso Robles Groundwater Basin Study – Phase II  
Authorization for Limited Sub-Lease of Photomapper (if needed – see 4.c above)

**ATTACHMENTS**

Agreement for Engineering Consulting Services  
Paso Robles Groundwater Basin Location Map  
State Water Project Infrastructure Map

## **Exhibit C**

## Exhibit C

Samples of District-Produced Meeting Announcements, Comments on Technical Deliverables, and Presentations in Support of the Groundwater Banking Plan

# Agenda for Today's Meeting

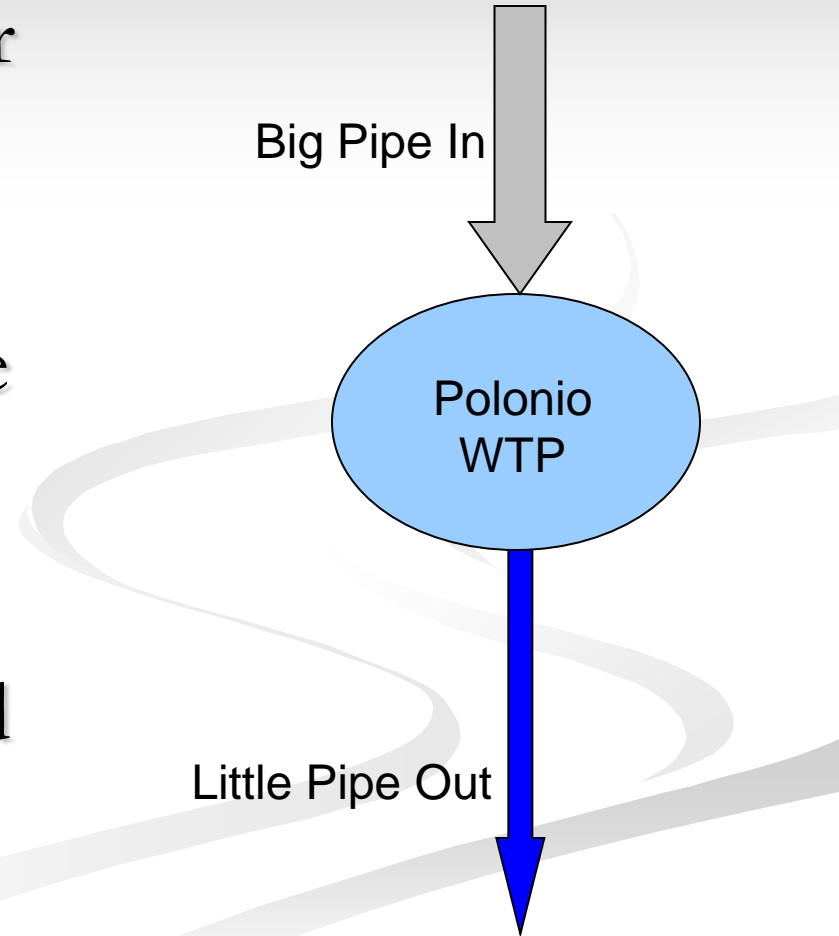
- Tour of the Polonio Water Treatment Plant
- Presentation on Methods Used to Bank Water in the Ground
- Panel Discussion
- Future Agenda Topics and Schedule Next Meeting

Coastal Branch of SWP

Big Pipe In

Polonio  
WTP

Little Pipe Out

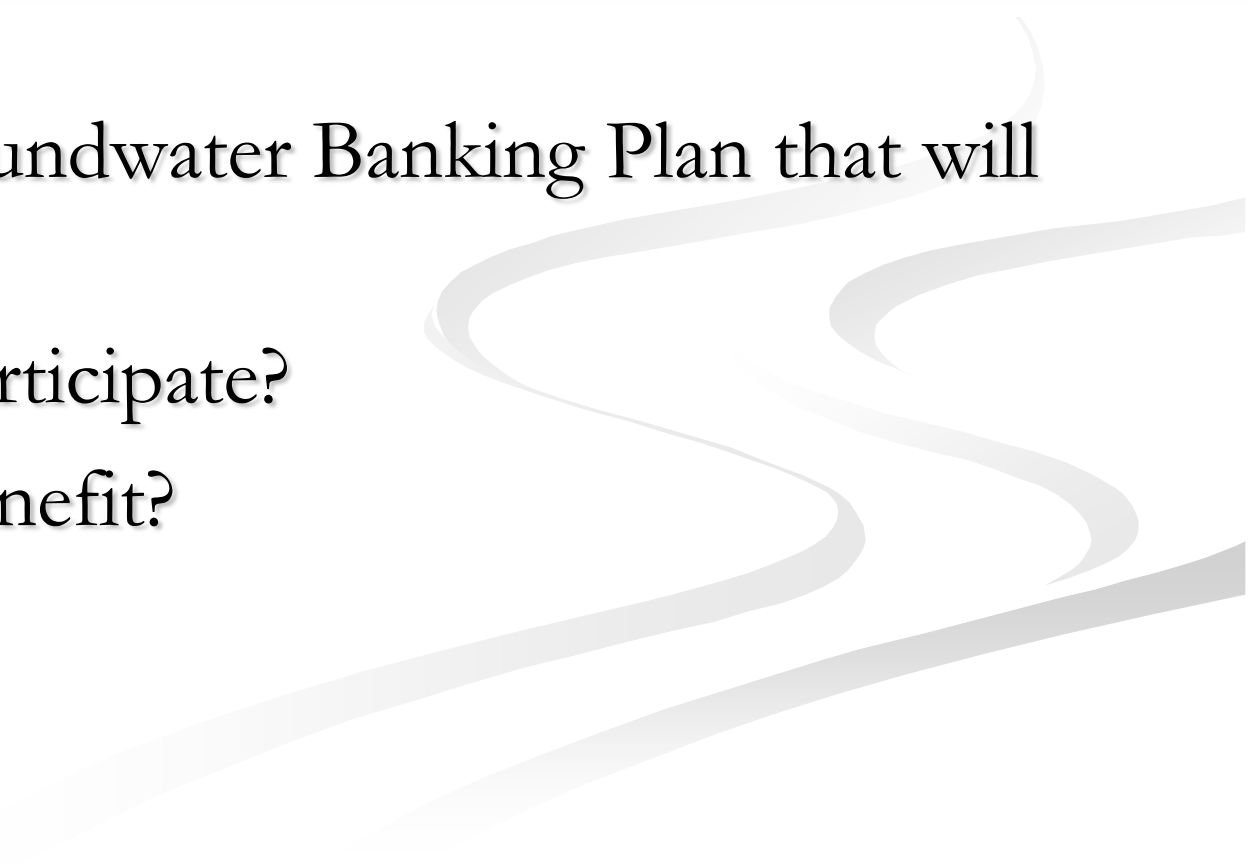


# **Paso Robles Basin Groundwater Banking Feasibility Study**

Review of Purpose and Scope

Courtney Howard, P.E., Water Resources Engineer  
Public Works Department of the San Luis Obispo County  
Flood Control and Water Conservation District

# Groundwater Banking

- Can San Luis Obispo County utilize excess State Water allocation through a Groundwater Banking Plan?
  - Is there a Groundwater Banking Plan that will be a win-win?
  - Who might participate?
  - Who might benefit?
- 
- Decorative wavy lines in the bottom right corner of the slide.

# Excess State Water Allocation

- Using 4,830 AFY of 25,000 AFY Allocation
- Contracts with State expire in year 2035
- District needs to show “beneficial use” of the supply in order to maintain ownership
- Bottom line.... “you not use, you loose!”
- Groundwater Banking is an option
- Financial opportunity through IRWM Grant

# Mission of the Groundwater Banking Feasibility Study

A regional study to put the District's State Water Project allocation to beneficial use for the people of San Luis Obispo County, while enhancing and protecting our groundwater supplies, and considering reliability improvements to our neighbors in Santa Barbara County.



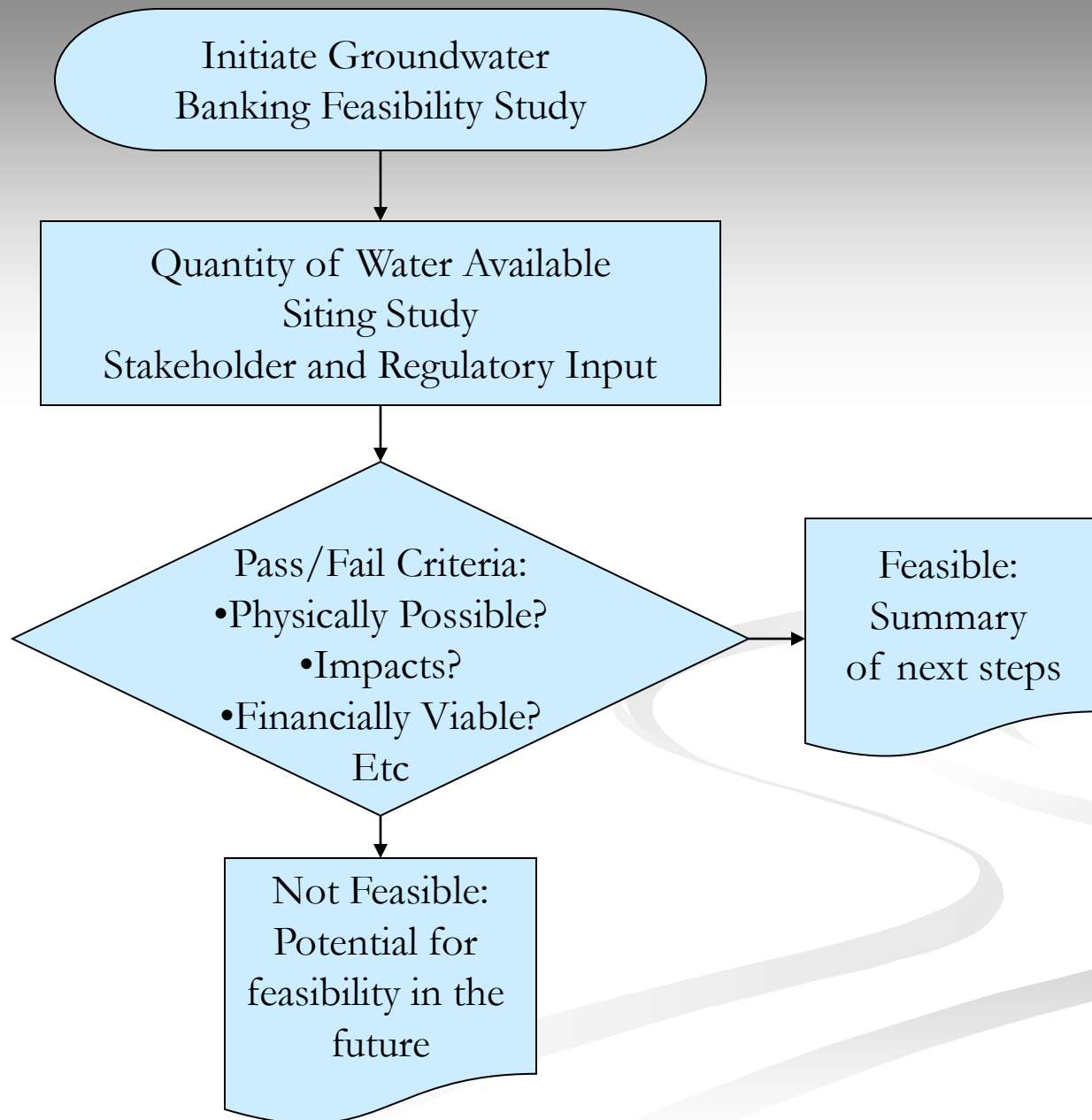
# Groundwater Banking Feasibility Study

## ■ Grant Agreement

- Water available for banking
- Siting study
- Stakeholder and Regulatory review
- Results, Conclusions, Next Steps

Community Input





# Potential Results

Not Feasible:

- Thoroughly assessed as an option
- Focus on other options

Feasible:

- Water Supply Improvement
- Regional Cooperation

**SAN LUIS OBISPO COUNTY FLOOD CONTROL  
AND WATER CONSERVATION DISTRICT  
WATER RESOURCES ADVISORY COMMITTEE  
GROUNDWATER BANKING SUB COMMITTEE**

**(Not a 'Brown Act' Committee)**

**Templeton Community Services District**  
420 Crocker Street  
Templeton

Thursday, December 6, 2006  
5:00 p.m.

---

Topic:

Paso Robles Groundwater Sub-basin Water Banking Feasibility Study  
Draft Preliminary Engineering Technical Memorandum - Review and Comment

A copy of the Draft Preliminary Engineering Technical Memorandum for your review and comment is available at the following website:

**<http://slocountywater.org/reports/irwm/gwbanking/>**

Please contact Courtney Howard (805-781-1016) if you would like to be sent a hard copy. This document will set the tone for the rest of the study, so it is important that you take time to review it carefully.

**Please email or mail your comments to Courtney Howard by December 15, 2006.** A comment form, with contact information, is attached for your use if preferable. Comments will be consolidated and submitted to the consultant so they can prepare for their next presentation to the Subcommittee on January 4, 2007.

No other items are on the agenda for this meeting.

**Purpose of the Committee:**

To advise the San Luis Obispo County Water Resource Advisory Committee on policy decisions relating to the potential banking of the State Water Excess Allocation and other alternatives.



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## Abbreviations and Acronyms

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CCWA	Central Coast Water Authority
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNPS	California Native Plant Society
Corps	United States Army Corps of Engineers
County	San Luis Obispo County
CVP	Central Valley Project
District	San Luis Obispo County Flood Control and Water Conservation District
DWR	<i>State</i> Department of Water Resources
EA	Environmental Assessment
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ESA	<del>federal</del> <i>federal</i> Endangered Species Act ( <i>federal</i> )
Feasibility Study	Paso Robles Groundwater Basin Water Banking Feasibility Study
GBSC	Groundwater Banking Subcommittee
GMP	groundwater management plan
gpm	gallons per minute
IFI	Important Farmlands Inventory





# 1 Introduction

The Paso Robles Groundwater Basin (Basin), located in northern San Luis Obispo County, (County) is one of the largest groundwater basins in the County (Figure 1-1). The Coastal Branch of the California State Water Project (SWP) enters the County and the central coast just east of the Basin near the town of Shandon and continues southwest across the Basin. These two features, along with the County's unused allocation of SWP water, led local water leaders to want to explore the feasibility of banking water in the Basin for the benefit of County residents. *The potential benefits to County residents of a banking program to County residents are outlined in section 1.3.*

## 1.1 Project Background

The Paso Robles Groundwater Basin Water Banking Feasibility Study (Feasibility Study) for the Paso Robles Groundwater Basin is being led by the San Luis Obispo County Flood Control and Water Conservation District (District) in coordination with the Groundwater Banking Subcommittee (GBSC) of the Water Resources Advisory Committee (WRAC). Additional stakeholders invited to participate include the North County Water Forum, the Shandon Advisory Committee, the Creston Advisory Body, and San Luis Obispo County State Water Subcontractors.

*planning effort.* The San Luis Obispo County Integrated Regional Water Management Plan (IRWM Plan) identified the feasibility study of the groundwater banking potential of the Basin as a high-priority project. Funding for this study, as well as several other planning projects *efforts* identified in the San Luis Obispo County IRWM Plan, was provided in part by a Proposition 50 Chapter 8 Integrated Regional Water Management Program Fiscal Year 2005-2006 Planning Grant.

## 1.2 Previous Studies *and Management Efforts*

Over the last several years, a number of studies were completed that will be used to provide information for the Feasibility Study. Some of these studies are briefly summarized below. *Basin and management activities*

### 1.2.1 San Luis Obispo County Integrated Regional Water Management Plan (2005)

The District in cooperation with the WRAC prepared the region's IRWM Plan to align *planning and* water resources management *planning* efforts for achieving sustainable water resources *county-wide* County-side with the State of California's (State) planning efforts through 2030. The *county-wide*

*The IRWM Plan*



IRWM Plan was used to support the County's planning and implementation of grant applications. The IRWM Plan integrates 19 different water management strategies that have, or will have, a role in protecting the region's water supply reliability, water quality, ecosystems, groundwater, and flood management, historically or in the future. The integration of these strategies resulted in a list of action items (projects, programs, and studies) needed to implement the IRWM Plan. District staff and the WRAC Integrated Regional Water Management Subcommittee prioritized the action items. The IRWM Plan was adopted in December 2005 and updated in July 2007.

The IRWM Plan identified <sup>planning efforts</sup> projects to fill data gaps in four areas, and whose completion would support the overall plan goals, objectives, and strategies and improve the IRWM Plan itself. These projects include:

- Groundwater Banking Plan (this project)
- Regional Permitting Plan
- Data Enhancement Plan
- Flood Management Plan

These planning projects were included in the Proposition 50 Chapter 8 Integrated Regional Water Management Program Fiscal Year 2005-2006 Planning Grant application, which is funding this Feasibility Study.

### **1.2.2 Paso Robles Groundwater Basin Study (2002)**

In 2002, Fugro West and Cleath and Associates prepared the Paso Robles Groundwater Basin Study (Basin Study) <sup>which</sup> investigated the hydrogeologic conditions and quantified the water supply capability of the Basin by defining the lateral and vertical extent of the aquifer, groundwater flow and movement, current water quality conditions, and perennial yield.

### **1.2.3 Paso Robles Groundwater Basin Study Phase II – Numerical Model Development, Calibration, and Application (2005)**

In 2005, Fugro West and ETIC Engineering developed a numerical groundwater flow model as a quantitative tool to evaluate future hydraulic conditions of the Basin. Using the model, the study evaluated the Basin's response to current and future water demands with and without supplemental water and identified areas of declining water levels.

### **1.2.4 Paso Robles Groundwater Basin Monitoring Program Eval (2003)**

In 2003, Cleath and Associates... (see Annual Report)

### **1.2.5 In 2005, Paso Basin Agreement... (see Annual Report) <sup>1-2</sup>**

### **1.2.6 In 2007, Board of Supervisors RLS... (see Annual Report)**





### 1.3 Project Goals

The goal of the Feasibility Study is to determine the feasibility and magnitude of potential water banking opportunities in the Basin. If feasible water banking opportunities are identified in this Feasibility Study, they can then be compared to other water management options identified by the District to improve the long-term water supply reliability for the residents of the County and the Central Coast. Potential benefits of a water bank may include:

- Improving local groundwater conditions within the Basin.
- Increasing dry-year water supply reliability for local water users and possibly the residents of the County and the Central Coast.
- Improving local groundwater quality in the Basin.
- Providing greater flexibility of water resources management in the County and the Central Coast.
- Reducing the County's dependence on imported water supplies in below-normal years.

### 1.4 Project Approach

Potential water banking opportunities within the Basin were evaluated based upon several different feasibility components that contribute to the overall feasibility, including:

- The availability of a water supply for banking.
- The ability to recharge the aquifer system.
- The ability to recover the banked water.
- The ability to deliver the banked water to the end user.

The water banking feasibility factors will be evaluated to address the hydrogeologic considerations, engineering considerations, and other considerations (such as environmental issues and overall groundwater management) to determine the overall feasibility and magnitude of individual water banking opportunities.

- **Hydrogeologic Considerations** focuses on the effects of local geologic and hydrogeologic conditions on the feasibility of banking water at selected locations



within the Basin. The local hydrogeologic conditions also determine the size of potential water banking opportunities.

- **Engineering Considerations** focuses on the technical requirements including water supply availability, infrastructure requirements, project operations, and the associated project costs associated with constructing and operating a water bank in the Basin.
- **Other Considerations** focuses on environmental issues and the overall approach to groundwater management, which may include institutional issues, legal issues, and governance issues associated with groundwater management, including water banking operations.

#### 1.4.1 Project Meetings

The project was completed on an accelerated schedule in order to meet the grant funding project schedule. The GBSC was established during the previously Basin Study to facilitate stakeholder involvement. The GBSC served in a similar capacity during this study. A series of presentations to the GBSC and the WRAC were used to inform the GBWC and interested parties about the project progress and elicit feedback. A total of six presentations were made to the GBSC/WRAC, listed below.

- GBSC Meeting No. 1 – October 4, 2006 - Introduction and Project Goals
- GBSC Meeting No. 2 – January 4, 2007 – Alternatives Development and Project Screening
- GBSC Meeting No. 3 – March 1, 2007 – Water Banking Project Refinement
- GBSC Meeting No. 4 – May 3, 2007 – Hydrogeologic Reconnaissance and Alternative Selection
- GBSC Meeting No. 5 – September 6, 2007 – Hydrogeologic Feasibility Analysis
- GBSC Meeting No. 6 – November 7, 2007 – Engineering Analysis and Draft Report

Presentations to the GBSC, are available on the SLOC water resources website under the IRWM Quicklink at: [www.slocountywater.org](http://www.slocountywater.org).

Presentations were also made to the Shandon Advisory Council and the Creston Advisory Body during the project. In addition, members from both of these groups attended the GBSC meetings.





### 1.4.2 Project Deliverables

The following documents were prepared during the completion of this project and presented to the GBSC to document the progress and refine project assumptions on water banking alternatives and project operations.

- **Preliminary Engineering Technical Memorandum (PETM).** The PETM presented a ~~base level~~<sup>feasibility</sup> of information on groundwater recharge and conjunctive use project formulation that was used to develop and evaluate potential water banking opportunities in the Basin. *Stakeholders*
- **Description of Water Banking Alternatives (Alternatives TM).** The Alternatives TM was distributed to the ~~WRAC~~<sup>WRAC</sup> and presented at the June 6, 2007 <sup>WRAC</sup> meeting (separate from the GBSC meeting list above). The Alternatives TM described the alternatives and operational scenarios that were being considered for evaluation. The alternatives and operational scenarios were refined based on input received on the Alternatives TM and responses from the June WRAC meeting.
- **Hydrogeologic Feasibility Progress Report (Progress Report).** The Progress Report summarized the information and approach used to develop the water banking alternatives, and presented the results of the groundwater modeling conducted to determine the hydrogeologic feasibility of developing a water bank within the Basin.

## 1.5 Project Team

This work was completed by the project team, which was lead by GEI Consultants, Inc., with hydrogeologic support by Fugro West and Cleath & Associates, and environmental support by Rincon Associates.

## 1.6 Report Outline

The report is organized into the following sections:

- **Section 1, Introduction,** provides project background information, identifies previous studies, summarizes the project goals, and outlines the project approach.
- **Section 2, Project Setting,** provides some general background information on local agencies, the existing core infrastructure that may be used in a project, the surface water supply availability for water banking operations, and <sup>1</sup> includes a brief summary of the hydrogeologic setting in the Basin. *1*



39,078 acre-feet per year for Santa Barbara County). Based upon these capacity estimates, the Coastal Branch between Devils Den and PPWTP has about 25,000 acre-feet more capacity than the current treatment capacity of the PPWTP.

#### 2.2.1.3 Coastal Branch Phase II

Phase II is a 101-mile buried pipeline extending from Devils Den (Phase I) to Vandenberg Air Force Base. To serve the other cities of southern Santa Barbara, CCWA built a 42-mile extension terminating at Lake Cachuma for a total length of 143 miles. The pipe diameter starts at 57 inches at Devils Den, reduces to 42 inches south of the City of Arroyo Grande, and reduces further to between 30 and 39 inches south of Vandenberg AFB. Two turnouts are located in San Luis Obispo County, Chorro Valley Pipeline and the Lopez Turnout. The Coastal Branch has a treated capacity of about 48,600 acre-feet per year – 45,486 acre-feet per year contracted capacity for CCWA and 4,830 acre-feet per year contracted capacity for the District.

#### 2.2.2 Nacimiento Water Project

The Nacimiento Water Project is one of the high-priority projects for the County and is currently in the <sup>construction</sup> design phase. The project consists of a pipeline, storage tanks, pump stations, and appurtenant facilities to convey water from Lake Nacimiento south to the communities of Paso Robles, Templeton, Atascadero, and San Luis Obispo, with options for future extensions. Since only about 60 percent of the supply is committed to the contracting parties, its capacity will meet additional supply reliability needs far into the future. In the meanwhile, groundwater banking opportunities and other conjunctive use possibilities can be researched and evaluated. These may include water banking and conjunctive use opportunities along the western side of the Basin. <sup>(see page 1)</sup>

### 2.3 Surface Water Supply Availability

Historically, California water users have relied on multiple sources of water supply in order to meet changing and increasing water demands. Typically, local water providers mix and match their supply sources to maximize water supply and quality and to minimize costs to meet both current and long-term water supply requirements. In addition to groundwater supplies, the County relies on surface supplies from local sources as well as imported supplies. Two imported water supplies to the County include the Nacimiento Water Project (under development) and the SWP.

*Naci not considered imported*





Barbara Counties. In Kern County, raw water from the SWP is used to irrigate crops and recharge the groundwater basin. Table 2-1 lists the 2004 mean water quality data for the California Aqueduct at Kettleman City (Check 21) which is located just upstream of the Coastal Branch.

**Table 2-1**  
**2004 Mean Water Quality**

Constituents	Units	MCL	Agricultural Water Quality Limits	Kettleman City
Alkalinity	mg/L as CaCO <sub>3</sub>	-	-	78
Antimony	mg/L	0.006	-	<0.001
Arsenic	mg/L	0.01	0.1	0.003
Beryllium	mg/L	0.004	0.1	<0.001
Boron	mg/L	-	0.7	0.2
Bromide	mg/L	-	-	0.21
Calcium	mg/L	-	-	20
Carbon-Dissolved Organic	mg/L as C	-	-	3.5
Carbon-Total Organic	mg/L as C	-	-	3.6
Chloride	mg/L	250(2)	106	71
Chromium	mg/L	0.05	-	0.002
Copper	mg/L	1.3(1) / 1.0(2)	0.2	0.003
Fluoride	mg/L	2	1	<0.1
Hardness	mg/L as CaCO <sub>3</sub>	-	-	102
Iron	mg/L	0.3(2)	5	0.013
Lead	mg/L	0.015	5	<0.001
Magnesium	mg/L	-	-	13
Manganese	mg/L	0.05(2)	0.2	<0.005
Nitrate + Nitrite	mg/L as N	-	-	0.69
Phosphorus - Ortho	mg/L as P	-	-	0.08
Phosphorus - Total	mg/L	-	-	0.1
Selenium	mg/L	0.05	0.02	0.001
Sodium	mg/L	-	69	49
Electrical Conductivity	µS/cm	-	-	464
Sulfate	mg/L	500(1) / 250(2)	-	36
Total Dissolved Solids	mg/L	500(2)	450	261
Turbidity	NTU	1 / 5(*)	-	6
Zinc	mg/L	5(2)	2	<0.005

**Notes:**

All reported constituents are the yearly mean of laboratory analytical values sampled monthly.

Nondetectable values were not used in the calculation of the yearly mean.

MCL = Primary (or Secondary if noted) Maximum Contaminant Levels based on California Department of Public Health drinking water standards (CA Water Quality Control Board Water Quality Goals)

Agricultural limits based on Food and Agriculture Organization of the United Nations - Irrigation and Drainage Paper No. 29 (<http://www.fao.org/DOCREP/003/T0234E/T0234E00.htm>)

mg/L = milligrams per liter

µS/cm = microSiemens per centimeter

NTU = nephelometric turbidity units

(1) = Primary MCL

(2) = Secondary MCL

- = Data not available

\* = Limit depends on method of data collection

*People may say that the Kettleman City results are above limits if data is not available; Does this really mean limit has been established?*



### 3 Potential Water Banking Operations

As described in Section 2, there are water supply availability and hydrogeologic factors that need to be considered during the evaluation of the project feasibility. The purpose of this section is to identify the water banking operations that have been considered ~~by the WRAC~~, and describe the operations that are being used in this study to test the project feasibility.

#### 3.1 Water Banking Concepts

The October 5, 2005, CCWA memorandum <sup>to the WRAC</sup> ~~regarding~~ <sup>entitled</sup> San Luis Obispo County Water Reliability Opportunities Update identified two potential groundwater banking concept alternatives for northern San Luis Obispo County.

**Treated Water Banking Concept:** This concept included creating a new turnout from the Coastal Branch Aqueduct to deliver treated water to a banking location for recharge (through injection, spreading, or in-lieu recharge). When SWP supplies exist in excess of current demand, water would be banked. When SWP water is not available, the previously banked water would be recovered and conveyed to the Coastal Branch for delivery water users.

**Raw Water Banking Concept:** This concept would require constructing a new pipeline to convey raw water from PPWTP (prior to treatment) to a banking location in the Paso Robles Groundwater Basin for recharge (through stream recharge, spreading, or in-lieu recharge). When SWP supplies exist in excess of current demand (~~4,830 acre-feet per year~~), water would be banked. When SWP water is not available, the previously banked water would be recovered and conveyed to the Coastal Branch for delivery water users, or, if necessary, pumped back to PPWTP for treatment using the same pipeline. <sup>to</sup>

<sup>only</sup> The Raw Water Banking Concept is being evaluated in this feasibility study in part because the available supply for banking significantly exceeds the existing capacity of the PPWTP and treated water pipeline capacity.

#### 3.2 Groundwater Recharge Methods

Groundwater recharge occurs naturally through percolation from rivers and streams, infiltration and percolation of precipitation on the groundwater basin, and the subsurface lateral movement of water into the groundwater basin from areas of relatively higher groundwater levels. In some cases, natural groundwater recharge cannot keep pace with





Recharge ponds/basins are often constructed in a series, with the initial ponds serving to settle the fine materials that may clog the pore space. Multiple settling basins are often interconnected to allow individual basins to be removed from service for maintenance. Aside from the periodic drying of the pond bottoms, maintenance may include scarifying, disking, or other mechanical means to remove fines and maintain infiltration rates. Additional maintenance may be needed on the levees or dikes to repair erosion caused by wind or wave action.

Some of the features of recharge basins/ponds include:

- Recharge of unconfined aquifer system,
- Relatively low cost to design and construct,
- No seasonal constraint on their use, and
- Existing opportunities such as gravel pits may be utilized.

Factors affecting successful implementation include:

- Requires large areas of relatively flat land.
- Requires permeable soils with no impermeable layers in near-surface. *CSD*

This method may be utilized in some locations within the Basin. Opportunities for recharge basins have been investigated by the ~~City of Templeton~~ and the ~~City of Atascadero~~ along the Salinas River as part of the Nacimiento Water Project. *Guadalupe water co.*

#### **3.2.1.2 Injection Wells**

Injection wells have been used to recharge aquifer systems for many years with varying degrees of success. Typically, injection wells have been used in areas where spreading may not be feasible due to space constraints; land is too expensive to use more land-intensive recharge methods; or thick, impermeable clay layers overlie the principal water bearing deposits.

Injection wells have been used in the West Coast Basin in Los Angeles for over 40 years to create a barrier to prevent seawater intrusion. These wells have been used only for recharge and not for recovery of the injected water. More recently, specially designed and constructed wells are used to both inject water into the aquifer system and later extract the stored groundwater.

Benefits / factors  
of Indirect Recharge?



channel. The water behind the weir and spilling over the weir spreads out in a shallow depth over the entire streambed, thereby increasing the wetted area and resultant recharge. Precautions should be taken to not create a hazard in a time of flooding by backing water out of its normal streambed. In this regard, rubber dams have been used to temporarily expand the wetted area.

By its nature, stream and river recharge has direct interaction between the groundwater and surface water systems. This may result in the recharged water returning to the stream at other locations, or during periods when recharge activities are not taking place.

### **3.2.2 Indirect Recharge**

Indirect recharge differs from the direct recharge methods because it does not physically place the water into the aquifer system; rather, surface water replaces the use of groundwater, thereby reducing local demand on the groundwater basin and providing the opportunity for the basin to recharge through the natural sources mentioned earlier. Indirect recharge is often called in-lieu recharge and is commonly used in areas where the historical water demand has relied on the underlying groundwater basin for supply, which has resulted in declining groundwater levels.

In-lieu recharge has been used in both urban and agricultural areas and often utilizes the existing infrastructure to distribute water supply to individual customers. One of the requirements of an in-lieu recharge program is that the replacement supply must be of the appropriate quantity and quality to satisfy the existing supply requirements.

Because recharge is not concentrated as in the case of direct recharge methods, it does not result in a mound of recharge water; rather, a more gradual increase in groundwater levels is evidenced over a larger area where pumping has suspended.

In-lieu recharge programs are often used to improve overall supply reliability by using the imported surface water supply in wet years or months when it is available, thereby reducing the dependence on the groundwater basin. Then in dry years, when imported supplies may be reduced or not available, groundwater is used to meet those demands not met by the imported supply. In this fashion, in-lieu recharge also takes advantage of the existing groundwater infrastructure.

Some of the benefits of in-lieu recharge include:

- Relatively cost-effective when able to use existing local infrastructure,
- Does not require construction of recharge facilities,





- Effectiveness is not dependent upon near surface local hydrogeologic conditions, and
- Does not create a localized mound of banked water near the recharge facilities that may limit recharge capacity.

Factors affecting successful implementation include:

- An existing water demand met by groundwater,
- Access to reliable imported water supply of suitable quality, and
- The ability to utilize existing infrastructure.

This method may be utilized in the Basin where existing groundwater demands have resulted in declines in local groundwater levels.

### 3.3 *Recharge and* Water Banking Operational Scenarios

*Recharge +*  
*Recharge* Three operational scenarios are being considered to evaluate the water banking feasibility in the Paso Robles Groundwater Subbasin that bookend the range of groundwater recharge and water banking opportunities that may be considered in the basin based in part upon the SWP supply availability described in Section 2.3. These scenarios include:

- Baseline Condition (no groundwater recharge or recovery),
- Groundwater Recharge Scenario (groundwater recharge only), and
- Water Banking Scenario (groundwater recharge and recovery).

For purposes of this feasibility study, the recharge and recovery capacity was assumed to be 1,500 acre-feet per month (18,000 acre-feet per year). This value represents a potential water supply from the State Water Project that is available to the region in most years through a combination of sources, and is considered to be an appropriate magnitude to test the water banking potential in the Basin. *Excess from the Basin model?*

*Recharge and Basin's response to*  
*7* These operational scenarios were evaluated using the previously developed groundwater model of the Paso Robles Groundwater Basin described in the Phase II Groundwater Basin Study. The model includes a 17-year simulation period of the groundwater model is divided into 34 six-month stress periods, which represent alternating the growing season (April to September) and the non-growing season (October to March). Figure 3-1 shows the project operations for the Baseline Condition, Recharge Scenario, and the Groundwater Banking Scenario based upon the 1,500 acre- feet per month project *Simulated*



### 3.3.2 Recharge Scenario

The Recharge Scenario focuses on improving local water supply conditions by supplementing existing groundwater supplies with an imported water supply. The imported supply may be used instead of pumping groundwater (in-lieu recharge) or by directly recharging the groundwater basin (direct recharge), thereby reducing the net demand on the groundwater system. Reducing the annual net groundwater demand results in higher groundwater levels than would have occurred without the recharge program. Existing (or new) groundwater wells are used to recover the recharged water for use on the overlying lands.

The purpose of the Recharge Scenario is to evaluate the effect of recharge operations on the Baseline Condition. This scenario includes only recharge operations; the groundwater pumping is the same as in the Baseline Condition to meet municipal, agricultural, and rural water demands. As shown in Figure 3-1, recharge occurs in nine years and totals about 162,000 acre-feet during the 17-year simulation period. These recharge periods were selected based upon SWP supply availability, described in Section 2.3.3. Recharge occurs in years with above-average rainfall and runoff.

### 3.3.3 Groundwater Banking Scenario

The goal of water banking is to store and recover groundwater for an intended use. Imported water is 'banked' in wet years when surplus supplies are available and recovered in drier years when the banked water is needed. A groundwater banking program differs from a groundwater recharge program by storing water for others that may or may not overlie the portion of the groundwater basin involved in the groundwater recharge activities. A groundwater banking program requires an accounting system to distribute the costs and benefits of the program among the participants (including the banking partners and overlying groundwater users). The banking program may serve an outside interest that pays either water and/or money to store water in the bank for their time of need.

Groundwater levels in the area affected by water banking operations may have greater fluctuations than there would have been without the banking program. During periods of recharge, groundwater levels may be higher than they would have been without the project. During recovery periods, groundwater pumping may exceed that of what was normally used, resulting in localized drawdown at the recovery wells that would have been greater than without the banking project.

The purpose of the Water Banking Scenario is to evaluate the effect of recharge and recovery operations (for export from the Basin) on the Baseline Condition and the Recharge Scenario. This scenario includes the same recharge operations as the Recharge

\* Operational Requirements of program are negotiated during its development





Scenario. The recovery operations include the local demand (as in the Recharge Scenario) and an additional recovery component to represent pumping of banked water to meet an additional demand. The disposition of the water recovered from the basin has not been associated with any individual water user.

For the Water Banking Scenario, the recharge operations are the same as the Recharge Scenario, as shown in Figure 3-1. During years when there is no supply for groundwater recharge, it is assumed that the banked water would be recovered and delivered for use outside of the basin. In the Water Banking Scenario, 90,000 acre-feet of groundwater is recovered during the simulation period. This represents about 55 percent of the total amount of recharged water. The recovery of banked water occurs in three periods, stress period 11-12, stress period 19-24 (3-year period), and stress period 27-28.

### 3.4 Affected Areas

The project participants are identified below because they may have a role in the planning, implementation, and operation of water banking projects in the Paso Robles Groundwater Basin for the following reasons:

- They supply water for banking,
- They use banked water, or
- They may be involved or impacted by recharge and recovery operations.

Future efforts will be needed to identify and codify the specific coordination, cooperation, and management of any future water banking activities among local and state agencies, as well as local land owners.

**San Luis Obispo County Flood Control and Water Conservation District (District)** – The District has the SWP contract that is being used as the water supply for banking. It also has the contract with CCWA to treat and convey water to the existing municipal and industrial (M&I) contractors in San Luis Obispo County.

**Central Coast Water Authority (CCWA)** – CCWA owns and operates the Coastal Branch Aqueduct and the PPWTP. CCWA also represents potential urban water users that may be interested in receiving banked water.

**Local Agricultural Water Users** – Local agricultural water users may provide local agricultural in-lieu recharge opportunities, and may be affected by groundwater banking operations. The local agricultural areas are identified based on a 2006 San Luis Obispo County land use survey prepared by the San Luis Obispo County Agricultural



Commissioner's Office. Coordination with agricultural land owners that may choose to participate in a feasible water banking project would occur under future efforts.

**Local Urban <sup>and rural</sup> Water Users** – Local urban water users may be affected by water banking operations. They may also be potential project participants that utilize <sup>recharged</sup> banked water. Coordination with local cities, <sup>and</sup> communities <sup>of resources</sup> may be necessary in the future to evaluate the effects of a potential water banking project on their existing water supply wells and to evaluate opportunities for them to participate in any potential project. This includes local purveyors like the City of Paso Robles and the Templeton CSD, and local advisory groups such as the Shandon Advisory Council and the Creston Advisory Body. <sup>recharge and</sup>

**Regional Urban Water Users** – Regional urban water users are included to represent potential out-of-basin water users that may become partners in a water banking project.



## 4 <sup>Location</sup> ~~Water Banking~~ Alternatives

This section describes the approach used to identify the locations in the Basin where groundwater recharge and recovery operations <sup>may take</sup> would be evaluated. The locations of the water banking alternatives evaluated in this feasibility study were identified primarily on the local hydrogeologic conditions. This approach was described in the PETM and presented at several GBSC meetings as part of the initial project screening and project site selection process.

### 4.1 <sup>Location</sup> ~~Water Banking~~ Evaluation Criteria

An initial screening of all seven groundwater sub-areas was completed using the available hydrogeologic information to identify potential project locations for further consideration.

Each of the water banking opportunities that passed the initial screening was evaluated based on its ability to satisfy the following water banking activities:

- The ability to recharge the aquifer system,
- The ability to recover the banked water, and
- The ability to deliver the banked water to the end user.

The specific hydrologic and engineering criteria described below were used to provide a preliminary assessment of water banking potential for individual sites.

#### 4.1.1 **Hydrogeologic Criteria**

The specific hydrogeologic evaluation criteria <sup>are listed</sup> are described below. <sup>are described in terms of what the conditions each need to have to be a high or low feasibility location for banking</sup>

- **Geologic/Hydrogeologic Setting**
  - <sup>do do what?</sup> High Feasibility: Includes areas with a thick, highly permeable aquifer that has a simple structure.
  - Low Feasibility: Includes areas with a thin, low-permeability aquifer with a complex structural setting.





- **Water Quality Considerations**

- High Feasibility: Includes areas of generally good quality for the specific uses (agricultural or urban) of the target aquifer.
- Low Feasibility: Includes areas of generally poor quality for the specific uses (agricultural or urban) of the target aquifer. This may include high total dissolved solids, nitrates, boron, or other natural or anthropogenic sources.

→ what's "generally good" ?  
- same (HHS's context) < 1000 mg/L ?

#### 4.1.2 Engineering Criteria

The engineering criteria listed below did not effect the selection of potential water banking locations to be evaluated, but were developed to identify other factors that may distinguish between alternatives.

- **Water Supply Availability** – The available water supplies and assumptions regarding their reliability were identified and evaluated for use this study. As described in Section 3, each alternative would be evaluated using the same water supply pattern, so this was not a criteria that would distinguish between alternatives.
- **Ability to Utilize Existing Infrastructure** – The water banking opportunities utilized the available infrastructure to deliver water from the SWP to the Basin, i.e., through the Coastal Branch and the Polonio Pass Pumping Plant. All potential banking projects used this as the starting point to identify additional conveyance requirements. It was determined that each alternative would be evaluated using the same starting point (at PPWTP), so this was not a criteria that would distinguish between alternatives.
- **Capital Cost and Operation and Maintenance Costs** – The required facilities for an individual water banking opportunity were based upon size and location as determined by the hydrogeologic evaluation. Capital costs for the required facilities (suitable for comparative purposes between water banking alternatives) were based on readily available local information. It is expected that project costs will be a significant factor affecting the overall feasibility of water banking opportunities in the Basin, and one of the primary factors distinguishing between projects.

the inflow of the  
and entry points  
returning of recycled water



## 4.2 Selected Alternatives

The three selected alternatives presented below were developed based on review of the existing available information and field investigation to verify local conditions.

For evaluation purposes, each of the three <sup>simulated</sup> alternatives <sup>assumes</sup> consists of a combination of direct recharge and agricultural in-lieu recharge. The recharge area was evaluated to determine a combination of direct and in-lieu recharge based upon the existing land use and local hydrogeologic conditions as described above.

For the recovery of banked water, the <sup>evaluation of</sup> ~~new~~ <sup>simulated</sup> recovery wells were located to minimize drawdown interference during recovery operations with existing wells and other recovery wells while limiting infrastructure requirements. The <sup>assumed to be</sup> ~~actual~~ <sup>assumed</sup> number and distribution of <sup>simulated</sup> recovery wells is based on existing well locations and local hydrogeologic conditions.

Figure 4-1 shows the locations of the three different areas for evaluation which include:

- Shell Creek/Camatta Creek and Lower San Juan Creek Recharge Areas,
- Creston Recharge Area, and
- Salinas River/Hwy 46 Recharge Area.

### 4.2.1 Shell Creek/Camatta Creek and Lower San Juan Creek Recharge Areas

The purpose of this alternative is to evaluate the groundwater banking potential in the San Juan Subarea shown on Figure 4-2. Potential areas that may support direct recharge were identified along Shell/Camatta Creeks and San Juan Creek. In addition, the agricultural areas (primarily vineyards) present in the Shandon area and along Shell Creek may provide in-lieu recharge opportunities.

The recharge operations included a combination of agricultural in-lieu recharge and direct recharge. This combination of in-lieu and direct recharge would disperse the recharge activities over a large area in order to access as much of the aquifer system as possible. This area is not subject to current groundwater level declines at this time.

Recovery operations would take place throughout the area receiving recharge water. Wells in this area can produce from 1,000 to 2,000 gallons per minute. It is expected that new groundwater recovery wells would be located along the conveyance pipeline to recover the banked water and return it to the PPWTP.





## 5 Hydrogeologic Evaluation

This section describes the results of the hydrogeologic evaluation of the recharge and water banking scenarios using a numerical groundwater flow model previously developed for the Paso Robles Groundwater Basin.

### 5.1 Model Background Information

The groundwater flow model used in this study to evaluate the recharge and water banking scenarios was previously developed for the County of San Luis Obispo Public Works Department by Fugro West, Inc. and ETIC Engineering (Fugro, 2005). The numerical groundwater model was developed in MODFLOW-2000 using the Groundwater Vistas graphical-user-interface for MODFLOW. The function of the model was to simulate groundwater level and storage changes in the Paso Robles Groundwater Basin for the 17-year simulation period representing the 1981 through 1997 historical period. In that study, the model was further adapted to evaluate three different scenarios of future water supply and demand in the Paso Robles Groundwater Basin.

The aquifer system in the Paso Robles Groundwater Basin is simulated in the groundwater flow model using four model layers.

- Model layer 1 represents the highly permeable unconfined, coarse-grained alluvial sediments associated with the channel corridors of the Salinas River and the Estrella River. Alternative 3 includes direct recharge into this layer.
- Model layer 2 represents the less permeable channel bed of the Salinas River and a low permeable fine-grained unit that underlies the modeled extent of the Estrella River and also extends to the north and south of the Estrella River by approximately three to four miles in each direction. None of the simulated alternatives include direct recharge into this layer.
- Model layers 3 and 4 represent the upper and lower portions of the confined to semi-confined Paso Robles Formation. Alternatives 1 and 2 include direct recharge into this layer. The project pumping associated with the groundwater recovery operations occur in these model layers. *What about Layer 1?*
- Reductions in groundwater pumping resulting from the in-lieu recharge operations were assigned to the individual model layer where the pumping occurs.

*these layers 3 & 4 are the same layer 4?*





those implemented in Alternative 2a. In the water banking scenario, recharge operations and recovery operations do not occur during the same stress periods but instead alternate according to the water banking schedule.

For Alternative 2b, a total of 33 recovery wells were implemented in the model with a combined extraction rate of 9,000 acre-feet per stress period (i.e., 1,500 acre-feet per month for six months). The locations of the recovery wells are displayed in Figure 5-4. In the model, four recovery wells were placed just east of the grid cells representing the Creston recharge area, one was placed to the west of the recharge cells, and the remaining 29 recovery wells were placed north of these recharge grid cells in the down-gradient direction. The recovery wells were placed in and around the area in which significant groundwater level rises were observed in Alternative 2a following stress periods 18 and 34 (Figure 5-4).

Plan view maps displaying the differences in simulated groundwater levels in model layer 4 between Alternative 2b and the Baseline Condition following stress periods 18, 24, and 34 are presented in Figure 5-4. At the end of stress period 18, groundwater levels were significantly higher than the Baseline Condition, which would likely result in either ponding at the ground surface or artesian conditions in some wells.

At the end of stress period 24, the recovery effects would likely result in groundwater levels several tens of feet lower than would otherwise be observed without the recharge and recovery project.

At the end of stress period 34, the groundwater levels would likely recover in the southern portion of the area where direct recharge occurs, but water levels would still be significantly lowered in the northern and eastern part of the area as a result of the earlier groundwater recovery operations.

Generally, groundwater level differences after stress period 34 were similar to those differences following stress period 24 in and around the immediate recharge area. However, groundwater levels further north from the recharge area after stress period 34 have not recovered to the levels experienced after the three-year recharge period following stress period 18. Overall, the highest positive differences in groundwater levels for Alternative 2b over the Baseline Condition occurred after the three-year recharge operations (i.e., stress periods 13 to 18 and stress periods 29 to 34) in the immediate Creston recharge area, while moderate negative differences persisted elsewhere at the end of the 34 stress periods due to delayed recovery of groundwater levels.



A plot of the increase in groundwater storage for Alternative 2b above the Baseline Condition over the 34 stress periods is also presented in Figure 5-4. The cumulative storage change curve over the 34 stress periods bears a similar shape to the water banking schedule curve, although the two curves diverge significantly by the end of the 34 stress periods because of the continued loss of recharge water in the streams and the inability of the aquifer to absorb the volume of the recharge project. At the end of stress period 34, the water banking operation had extracted 90,000 acre-feet of groundwater; groundwater storage had decreased by 3,900 acre-feet below the Baseline Condition; and 77,300 acre-feet of groundwater above the Baseline Condition discharged to the stream network and left the area as stream outflow. Increases in evapotranspiration losses and subsurface outflows through the boundary conditions relative to the Baseline Condition were not significant for Alternative 2b.

### 5.5.3 Alternative 3 - Salinas River/Highway 46 Recharge Area

#### 5.5.3.1 Alternative 3a: Recharge-Only Scenario

Alternative 3a involves the implementation of the recharge-only schedule in the Salinas River/Highway 46 recharge area (Figure 4-4). The allotments of direct recharge and in-lieu recharge for each stress period are presented in Table 5-1. The total in-lieu recharge potential for the Fall-Winter and Spring-Summer stress periods in Alternative 3 are 926 and 4,818 acre-feet, respectively, or 10 percent and 54 percent of the 9,000 acre-feet of water available for recharge during active recharge stress periods. The remaining water available for direct recharge during the Fall-Winter and Spring-Summer stress periods in Alternative 3 was 8,074 and 4,182 acre-feet, respectively. Direct recharge in the Salinas River/Highway 46 area was implemented in 9 grid cells in model layer 1, for a total recharge area of 90 acres (i.e., 10 acres per grid cell).

The model results comparing the changes in groundwater levels and storage between Alternative 3a and the Baseline Condition is shown in Figure 5-5 for layer 4 and Figure 5-6 for layer 1. *direct recharge into this layer (2500 storage change?) what about layer 1?*

In general, the highest groundwater level increases in model layer 4 centered about the Salinas River recharge cells and the in-lieu recharge areas to the northwest, and decreased radially away from the middle regions of these areas (Figure 5-6). As with Alternatives 1a and 2a, the decrease in the groundwater level rise between stress period 18 and stress period 24 reflects the recovery of the aquifer system towards the Baseline Condition groundwater levels during this three-year period in which recharge was not active. The subsequent increase in groundwater levels in Alternative 3a relative to the Baseline Condition from stress period 24 to stress period 34 reflects again the active recharge operations from stress periods 25 to 26 and stress periods 29 to 34. *layer 4? in-lieu recharge? 5-6 is change in levels too. layer 1*





A plot of the increase in groundwater storage for Alternative 3a above the Baseline Condition over the 34 stress periods is also presented in Figure 5-5. The cumulative storage change curve retains a similar shape to the recharge-only schedule curve over the 34 stress periods. The impacts of Alternative 3a on stream outflow, ~~evapotranspiration losses, boundary condition outflows,~~ and overall groundwater storage relative to the Baseline Condition are presented in Table 5-2.

Of the total recharge amount of 162,000 acre-feet implemented over the 34 stress periods, approximately 78,000 acre-feet (about 48 percent) of this amount is reflected in increased groundwater storage (Figure 5-5). The remaining 83,900 acre-feet of the recharge discharges from the aquifer system to the stream network and leaves the area as stream outflow. As with Alternatives 1a and 2a, increases in evapotranspiration losses and subsurface outflows through the boundary conditions relative to the Baseline Condition were not significant for Alternative 3a.

#### 5.5.3.2 Alternative 3b: Water Banking Scenario

Alternative 3b involves the implementation of the water banking schedule (Figure 3-1) in and around the Salinas River/Highway 46 recharge area (Figure 4-4). The water banking schedule includes both direct and in-lieu recharge operations according to the recharge schedule used for Alternative 3a, as well as recovery operations during stress periods when recharge operations are not active (see Table 5-1 and Figure 5-7). The recharge operations for Alternative 3b are identical to those implemented in Alternative 3a. In the water banking scenario, recharge operations and recovery operations do not occur during the same stress periods but instead alternate according to the water banking schedule shown in Figure 3-1 and in Table 5-1.

For Alternative 3b, a total of 17 recovery wells were implemented in the model with a combined extraction rate of 9,000 acre-feet per stress period (i.e., 1,500 acre-feet per month for six months) for stress periods when recharge operations are active. The locations of the recovery wells are displayed in Figure 5-7. The 13 recovery wells in the Salinas River recharge area accounted for 87 percent of the total extraction rate of 9,000 acre-feet per stress period and the 4 recovery wells placed in the in-lieu recharge area accounted for the remaining 13 percent of the total extraction.

Maps displaying the differences in simulated groundwater levels in model layer 4 between Alternative 3b and the Baseline Condition following stress periods 18, 24, and 34 are presented in Figure 5-7. At the end of stress period 24, water levels in the in-lieu area would approach the levels expected in the Baseline Condition. However, as noted previously, only 13 percent of the total recovery extraction occurs in the four recovery wells associated with the in-lieu recharge area, subsequently mitigating the drawdown of



## 6 Engineering Evaluation and Cost Estimate

The modeling analysis described in Section 5 demonstrated the effectiveness of the alternatives. This section identifies the facilities needed to implement each alternative, and provides a cost estimate that can be used to determine the comparative cost-effectiveness of each of the alternatives.

### 6.1 Evaluation Criteria

The engineering evaluation criteria identified in Section 4.2 included:

- Water Supply Availability
- Ability to Utilize Existing Infrastructure
- Capital Cost and Operation and Maintenance Costs

All the alternatives evaluated utilized the same existing infrastructure to access the same project water supply available for recharge or water banking operations, so these criteria do not discriminate between the alternatives. The required facilities for an individual alternative were based on the project location (described in Section 4) and hydrogeologic evaluation (described in Section 5). The capital costs of the required project facilities and O&M costs for the project implementation reflect the differences between alternatives, and were therefore used to provide the comparative evaluation between water banking alternatives.

### 6.2 Water Supply Availability

The San Luis Obispo County SWP Table A contract amount totaling 25,000 acre-feet per year is the primary source of water for this project. This supply is highly variable, with water supply availability ranging from about 20 percent in 1977 to 100 percent in other years, with a long-term average of about 70 percent of the contract amount for SWP contractors south of the Sacramento-San Joaquin Delta. The hydrologic and water delivery uncertainty associated with the SWP supply is documented in past deliveries records and modeling of future operations as described in Section 2.3. Looking to the future, factors such as climate change, the integrity of the Sacramento-San Joaquin Delta levees, and the protection of threatened or endangered species may continue to affect water supply availability, and may reduce future SWP supply availability compared to past conditions. This uncertainty increases the need to have projects in place to fully





utilize the SWP supplies when they are available to improve overall water supply reliability and reduce dependence on SWP water in dry and critical dry years or when operations are curtailed.

For purposes of this analysis, the project deliveries of 1,500 acre-feet per month (18,000 acre-feet per year) were used to test the hydrogeologic feasibility of recharge and recovery operations, and determine the facility requirements and their associated costs. The project delivery rate was developed based on an evaluation of the long-term water supply reliability of the SWP supply provided by DWR and an evaluation of the existing commitments of the supply within the County. Table 6-1 shows the disposition of the SWP Table A contract water for the existing condition and six alternatives considered in this study. The existing and proposed uses of the available supplies are described below.

Table 6-1  
Disposition of Project Water for Recharge and Water Banking Alternatives  
for a 40-Year Project Life

	Calculation	Existing	Alt 1a	Alt 1b	Alt 2a	Alt 2b	Alt 3a	Alt 3b
<b>Annual Water Use (acre-feet per year)</b>								
R1 Total SLOC Table A contract allocation	Value	25,000	25,000	25,000	25,000	25,000	25,000	25,000
R2 Existing SLOC M&I water contractors allocation	Value	4,830	4,830	4,830	4,830	4,830	4,830	4,830
R3 Existing SLOC M&I water contractors Drought Buffer	Value	3,617	3,617	3,617	3,617	3,617	3,617	3,617
R4 Excess Allocation of SLOC Table A contract allocation	R1-(R2+R3)	16,553	16,553	16,553	16,553	16,553	16,553	16,553
R5 Recharge Operations	Value	0	18,000	18,000	18,000	18,000	18,000	18,000
R6 Recovery Operations	Value	0	0	18,000	0	18,000	0	18,000
R7 Unused Water during Recharge Years	R1-(R2+R5)	20,170	2,170	2,170	2,170	2,170	2,170	2,170
<b>Years of Operation</b>								
R8 M&I Deliveries	Value	40	40	40	40	40	40	40
R9 Recharge Operations	Value	26	26	26	26	26	26	26
R10 No Drought Buffer/Excess Allocation for Recharge Operations	Value	14	14	14	14	14	14	14
R11 Recovery Operations	Value	0	0	14	0	14	0	14
<b>Total Water Use (40-year totals in acre-feet)</b>								
R12 SLOC M&I Water Contractors Deliveries	R2*R8	193,200	193,200	193,200	193,200	193,200	193,200	193,200
R13 Drought Buffer (to ensure wet water delivery to M&I contractors)	R3*R10	50,638	50,638	50,638	50,638	50,638	50,638	50,638
R14 Recharge Operations	R5*R9	0	468,000	468,000	468,000	468,000	468,000	468,000
R15 Total Imported Supply (wet water)	R12+R14	193,200	661,200	661,200	661,200	661,200	661,200	661,200
R16 Available Water of SLOC Table A contract amount	(R1*R8)-(R12+R14)	756,162	288,162	288,162	288,162	288,162	288,162	288,162
R17 40-Year Table A Contract Amount	R13+R15+R16	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
R18 Recovery Operations	R6*R11	0	0	252,000	0	252,000	0	252,000

**County M&I Water Contractors** - The existing County M&I water contractors have a contract for 4,830 acre-feet per year. Over the 40-year project life, this totals 193,200 acre-feet. These deliveries are assumed to have the highest priority of the potential uses for the supply, and would be delivered prior to deliveries for recharge operations.

**Drought Buffer** - The existing County M&I water contractors have a drought buffer totaling 3,617 acre-feet per year. The drought buffer is used to ensure full delivery (up to 4,830 acre-feet per year) to the M&I water users in years when delivery amounts are reduced due to dry conditions.



For purposes of this analysis, it is assumed that the drought buffer would be requested in about 35 percent of years during the 40-year project life. No recharge operations take place during these years for the recharge alternatives. For the water banking alternatives, these years coincide with recovery operations (18,000 acre-feet per year). Over the 40-year project life, this totals 50,638 acre-feet. The drought buffer has the second-highest priority for the available SWP supply.

**Excess Allocation** – This represents the unused portion of the County's SWP supply that is available for others to use. In most years, it is the difference between the contract amount and the actual deliveries to County M&I water contractors. The annual excess allocation is reduced in years when the drought buffer is implemented by the amount of the drought buffer.

The excess allocation represents water that is not imported into the basin. Over the 40-year project life, this totals 288,162 acre-feet. One of the goals of this project is to better utilize the County's SWP supply, which can be described as minimizing the excess allocation.

**Recharge Operations** – This supply represents the water used for groundwater recharge operations in the Paso Robles Groundwater Basin. In the 65 percent of the years when recharge occurs, it totals 18,000 acre-feet per year. Over the 40-year project life, this totals 468,000 acre-feet. Recharge operations have the third priority for the SWP supply.

*Since the model was run for 17 yrs, cannot use 17-yr results; interpolation not linear*

**Recovery Operations** – This supply represents the stored water recovered from the Paso Robles Groundwater Basin and returned to PPWTP for use outside the Basin. In the 35 percent of years when recovery operations occur (14 years), it totals 18,000 acre-feet per year. Over the 40-year project life, this totals 252,000 acre-feet.

### 6.3 Facility Requirements

Water banking facilities were developed <sup>7</sup> sized to accommodate 1,500 acre-feet per month of recharge and recovery. The main project facilities to implement a recharge or water banking project are listed below.

- **Conveyance Facilities** - The conveyance facilities included the main project pipelines and pumping plants necessary to deliver raw water from PPWTP to the banking location(s) and return recovered water to the PPWTP for delivery to the end users outside of the Basin. The length of the main conveyance pipeline and the number of pumping plants varies for each of the three alternative locations.
- **Recharge Facilities** - The recharge facilities varied by alternative based on the hydrogeologic conditions and the type and amount of in-lieu recharge. The land





for the recharge basins, construction of the basins, and additional piping for distribution to the recharge basins are needed for direct recharge operations. Additional pipelines and connections to existing irrigation systems were included to deliver water to the selected agricultural areas for in-lieu recharge operations. The estimated number of recharge basins and agricultural in-lieu recharge acreage varies for each of the three alternative locations.

- **Recovery Facilities** - Recovery facilities include the new wells and pipelines needed to extract the banked water and deliver it to the main conveyance pipeline described above. As described in Section 5, the wells were located to reduce the potential impact of recovery operations on existing wells and other recovery wells in the area. The number of recovery wells and associated collection systems varies for each of the three water banking alternatives.

## 6.4 Project Costs Assumptions

The project costs were developed for each alternative for comparison purposes based on the facility requirements described in Section 6.3 and the project cost assumptions described below.

*The water supply from the basins in 6.3.*

### 6.4.1 Capital Project Costs Assumptions

- **Pipeline Costs** - Pipeline costs were estimated based on information contained in the 2006 version of Means Heavy Construction Cost Data (Means) as adjusted from December 2005 to November 2006 costs by Engineering News Record cost indices (Dec. 2005 at 8462.45, Nov. 2006 at 9123.64). In addition, the national averages published by Means have been adjusted to account for regional differences (Santa Barbara, CA, Dec. 05 at 7647 to Nov. 06 at 7911). The installed cost equaled \$211 per foot for ductile iron 30-inch-diameter pipe.
- **Infiltration Basins** - Infiltration basin cost opinions have also been developed through the use of Means. They are based on the use of 11 cubic yard, self-propelled scrapers with a maximum haul distance of 1,500 feet. The cost opinions include the use of a water truck and sheepsfoot roller for compacting berms after the soil is spread by the scrapers. Based on up to five acre basins up to four feet deep and all soil being placed locally, the Engineer's opinion of cost per cubic yard, adjusted in the same manner as above, will be \$5.32 per cubic yard.
- **Recovery Wells** - The cost opinions were based on wells estimated to be 16-inch diameter and up to 400 feet deep and producing 1,000 gallons per minute. The well water-level drawdown was assumed to be 100 feet with an additional 50 feet



#### 6.4.4.1 Unit Water Costs

The cost of the SWP supply consists of fixed costs and the cost to deliver water to Polonio Pass WTP.

- **Fixed Costs** – The fixed cost for use of the SWP facilities applies to the full contract amount, and totals \$64 per acre-foot per year.
- **Delivery Costs** – The current (2007) cost to deliver water to PPWTP totals \$494 per acre-foot (including the fixed costs described above).

#### 6.4.4.2 Total Water Costs

The total water costs for the 40-year project life were estimated by applying the unit water costs to the water uses presented in Table 6-1. The total water costs for the different uses are described below.

- **M&I Water Contractors** - The County M&I water contractors have the same water use, and therefore the same water costs, in all the alternatives, totaling about \$104.7 million during the 40-year project life, which includes \$21.6 for the fixed-costs contractors (including the fixed costs for the Drought Buffer) and \$83.1 million for delivery costs. This is paid for by the County M&I water contractors.
- **Excess Allocation** - Under the existing condition, the 40-year cost of the excess allocation totals \$45.2 million, which is paid by County residents. The reduction in the excess allocation resulting from the recharge operations reduces the County's cost share to \$15.2 million over the 40-year period. The cost difference (\$30 million) is included in the water costs for the recharge operations (described below).
- **Project Water for Recharge Operations** – Based upon the unit costs provided above and the recharge operations assumptions, the cost for the water supply for the 40-year project life totals \$231.2 million. This includes about \$30 million in fixed costs and \$201.2 million for delivery of the water to PPWTP. These costs are applied to all the alternatives.

### 6.5 Cost of Alternatives

The cost estimate for each of the alternatives is presented below.





the pipelines and connections to the local irrigation systems to accommodate approximately 500 acres of in-lieu recharge. The estimated costs for the recharge facilities total about \$5.1 million.

- **Recovery Facilities** – The primary recovery facilities for this alternative include fifteen 800-gpm wells, and approximately 90,000 feet of collection pipelines to return the recovered groundwater to the main pipeline. The local well yields determined the number of production wells needed to recover the stored water. The estimated costs for the recovery facilities total about \$24.0 million.
- **O&M Costs** – The O&M costs for this alternative total about \$95.3 million, which include the energy costs to pump the banked water and return it to the PPWTP.

Table 6-7  
40-Year Project Cost Estimate for Alternative 3b

Cost Element	Cost (\$ million)	Percent of Total Project Cost
Water	\$231.2	56%
Conveyance Facilities	\$48.9	12%
Recharge Facilities	\$5.1	1%
Recovery Facilities	\$7.7	2%
Contingency and Administration	\$27.1	7%
O&M	\$95.3	23%
<b>TOTAL</b>	<b>\$415.3</b>	<b>100%</b>

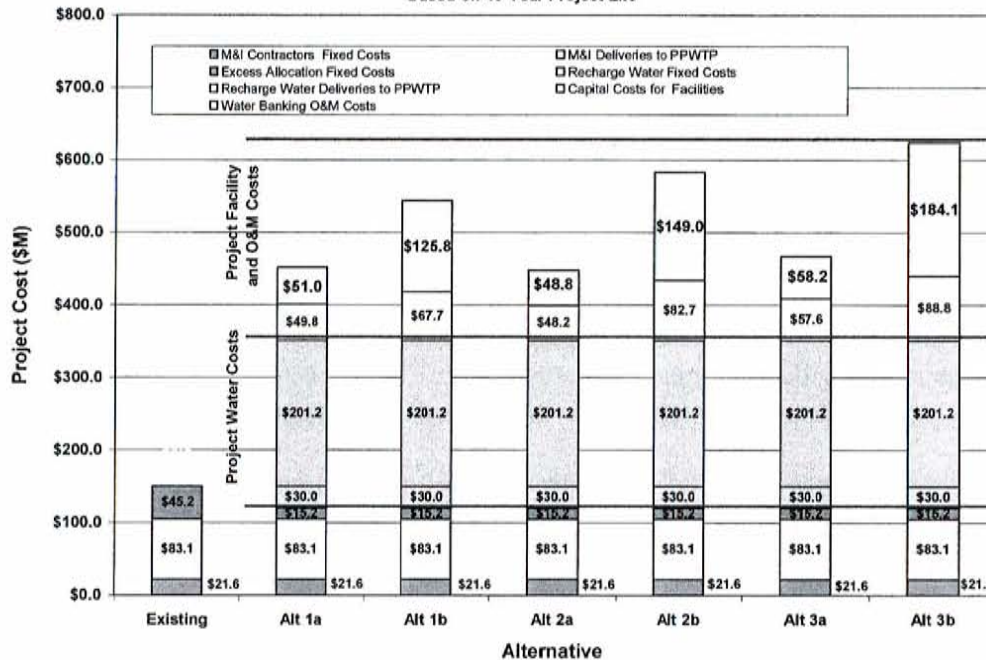
## 6.6 Alternative Cost Comparison

The goal of this project was to determine if groundwater banking in the Paso Robles Groundwater Basin is feasible. The alternatives were formulated to deliver the same recharge capacity and recovery capacity (for water banking alternatives) to allow an 'apples to apples' comparison of the project effectiveness including the costs. The potential project locations were identified based upon available hydrogeologic information. Groundwater modeling was used to evaluate hydrogeologic feasibility and effectiveness of each of the alternatives. The initial cost estimates for each of the alternatives was developed and provided in Tables 6-2 through 6-7. This information is summarized on Table 6-8 to facilitate a comparison between the recharge and water banking alternatives.

*apple to apple is size + location + water available  
apple to orange is cost vs. amount recoverable/rechargeable  
however can conclude  
↑ cost for lower retention*



Figure 6-1  
Distribution of Costs for Recharge and Water Banking Alternatives  
Based on 40-Year Project Life



Throughout the 17-year simulation period, each year of additional recharge resulted in an increased percentage of water discharging to the stream system as shown in Section 5. This occurs as the groundwater basin fills as a result of the recharge, exceeding the local groundwater storage capacity, and discharging groundwater into the nearby rivers and streams. Each year of additional recharge results in an increased increment of recharge discharging to the local stream system.

As a result of increased discharges to the stream system with continued long-term recharge, the estimated volume of water that may remain in storage over the 40-year project life may be less (as a percentage of the water recharged each year) compared to the results of the 17-year simulation period. This diminishing return on the recharged water would be expected to occur for all the alternatives, and should be considered when comparing the effectiveness of the alternatives.

① therefore,

Based upon the hydrogeologic analysis and the average water costs presented on Table 6-9, Alternative 1a appears to be the most effective recharge alternative because it has the largest volume of recharged water remaining in storage. Alternatives 2a and 3a retain less than one-half of the water in storage at the end of the simulation period.

② Since there are no distinguishing between costs, only hydrogeologic results is a distinguishing.





**Table 6-9  
Comparison of Recharge Alternatives**

	Change in Groundwater Storage as Percent of Recharged Water	Cost (\$/acre-foot)
Alt 1a	81%	\$600
Alt 2a	29 %	\$600
Alt 3a	48%	\$620

From Alternative 3a there appears to be potential recharge opportunity along the Highway 46. This area has a large potential agricultural in-lieu potential, and the area is experiencing declining groundwater levels. This area is also located a greater distance from the Salinas River which may improve the effectiveness of a recharge project.

*more* (i) Based upon the project descriptions and facility requirements, there are no significant differences in the project costs for the recharge alternatives which distinguish between their cost effectiveness.

### 6.6.2 Water Banking Alternatives

The estimated total costs of the water banking alternatives shown on Table 6-8 reflect the distance of the alternative location from the PPWTP, and the variability of the local hydrogeologic conditions on the ability to recharge and recover water.

The total estimated 40-year project cost of the water banking alternatives range from \$357 million to \$415 million, which corresponds to \$760 to \$890 per acre-foot delivered to the recharge area and the return of stored water to Polonio Pass WTP.

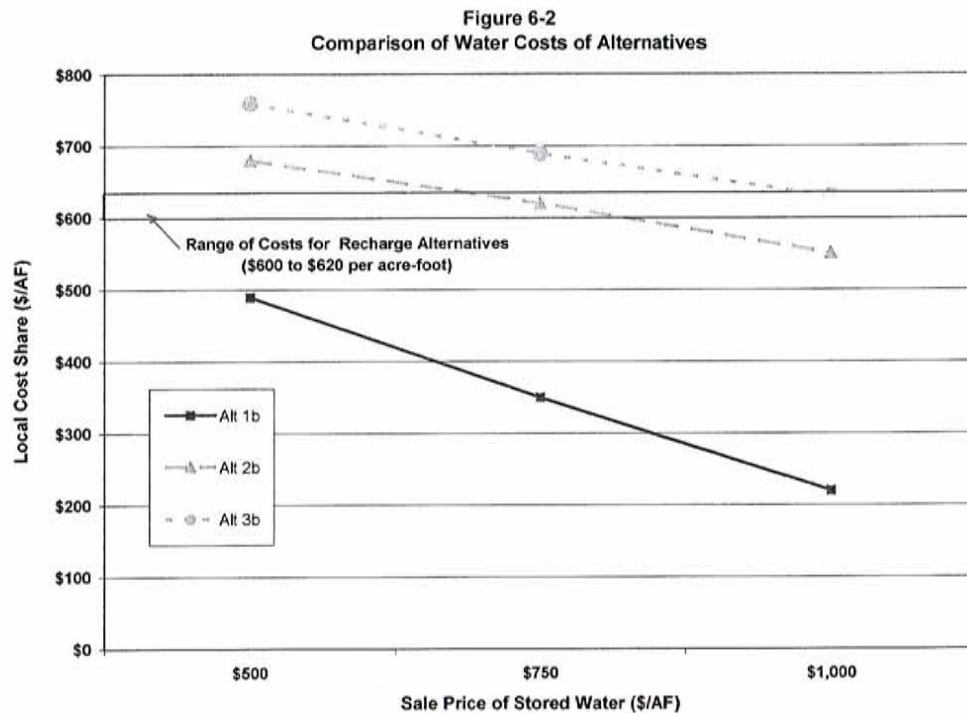
The cost of the water, including the fixed costs (\$30 million) and the delivery costs to PPWTP (\$201.2 million), is the same for all the alternatives ( total of \$231.2 million) and is about 56 to 65 percent of the total project cost as shown on Figure 6-1.

The water banking alternatives result in a smaller change in groundwater storage compared to the recharge-only alternatives because of the recovery of banked water. As shown on Table 6-8, over the 40-year project period, the water banking may provide about 252,000 acre-feet of dry year water supply that may be sold to out-of-basin water users to generate revenue to partly fund the projects. In addition, the water banking projects result in increased groundwater in storage in the Basin.

While the recharge alternatives will most likely be funded by the local project participants that benefit from the project, the water banking alternatives distribute the



costs among the local project participants and water banking partners, thereby reducing the local cost share. The sale price of the stored water will determine the eventual cost share between local project participants and banking partners. As shown on Figure 6-2, as the price of the stored water increases, the local cost share is reduced.



*note to Hydrogeol vs. Engineer or conclusions*

Based upon the hydrogeologic analysis and the average water costs presented on Table 6-10, Alternative 1b appears to be the best banking alternative because it has the largest volume of the recharged water remaining in storage and is the lowest cost water banking alternative.

Alternative 2b does not appear to be a viable water banking option because the limited groundwater storage capacity results in losses of the banked water outside of the system, and may result in the recovery of native groundwater to meet the same water banking delivery targets. In addition Alternative 2b

Alternative 3a is the farthest from the Polonio Pass WTP, and thereby has the greatest facility and operations costs of the three water banking alternatives. In addition, as shown in the modeling results, the close interaction between the Salinas River and the



adjacent alluvial deposits is likely to result in the losses of recharged water to the Salinas River that are not recoverable. Third, Templeton and the City of Paso Robles have municipal supply wells in the area that may be impacted by groundwater recovery operations.

Table 6-10  
Comparison of Water Banking Alternatives

	Change in Groundwater Storage as Percent of Recharged Water	Cost (\$/acre-foot)
Alt 1a	35%	\$760
Alt 2a	0%	\$810
Alt 3a	31%	\$890

*hydrogen vs. costs*  
*for*  
*best alt*  
*hydro geo vs. Engin to eval feasibility overall*  
*Agree w/ Tronj make connection study*

## 6.7 Groundwater Management Considerations

Groundwater management is the planned and coordinated local effort of sustaining the groundwater basin to meet future water supply needs. In 1992, with the passage of Assembly Bill AB 3030 (AB 3030), local water agencies were provided a systematic way of formulating groundwater management plans (California Water Code, Sections 10750, et seq.). AB 3030 also encouraged coordination between local entities through joint power authorities or memorandums of understanding (MOU). In 2002, Senate Bill 1938 (SB 1938) was passed, which further emphasized the need for groundwater management in California.

Preparation of a groundwater management plan (GMP) is the first step in developing the management and monitoring framework that can support future groundwater management efforts by:

- Identifying local issues and developing solutions to address them.
- Improving the understanding of the local hydrogeologic setting and groundwater conditions through an expanded groundwater monitoring program.
- Meeting eligibility requirements for funding opportunities that support groundwater management activities such as the Local Groundwater Assistance Act of 2000 (AB303).





Description
<b>DWR Bulletin 118 Suggested Components</b>
1. Manage with guidance of advisory committee
2. Describe area to be managed under GMP
3. Create links between BMOs and goals and actions of GMP
4. Describe GMP monitoring programs
5. Describe integrated water-management planning efforts
6. Report of implementation of GMP
7. Evaluate GMP periodically

## 6.8 Groundwater Banking Operational Considerations

Prior to the development of a recharge or water banking project, considerable work <sup>would</sup> needs to be completed to develop a program that equitably shares the project's costs and benefits among the participating entities and those affected by the project operations. Some of these issues (i.e., groundwater monitoring) are similar to those included in the GMP described above.

### 6.8.1 Groundwater Monitoring

A groundwater monitoring program would need to be established to monitor the changes in groundwater levels and groundwater quality due to the operations of the project. The monitoring program would need to be established prior to project operation to document the baseline conditions. Thereafter, routine monitoring of groundwater levels and quality can be used to monitor the basin response and establish the project's operational criteria.

The monitoring program may include land use and crop surveys to identify changing land and water use patterns in the affected area.

The monitoring reports would be made available to the participating agencies and affected parties participating in the management or operation of the project.

### 6.8.2 Groundwater Banking Operating Agreements

Agreements will be needed to identify all project participants including the lead agency, potential affected parties, water banking participants, and monitoring groups, and establish the goals and objectives of the project.

## **Exhibit D**



**{In Archive} RE: Grant Agreement No. 460000450jwerst@co.slo.ca.us5;  
SLOCWC&FCD October 15, 2006 Progress Report**

**Douglas Bird** to: ndeardor

10/16/2006 09:43 AM

Cc: Courtney Howard, Mark Hutchinson, Jeff Werst, Sylas Cranor,  
Wendy Hall

From: Douglas Bird/PubWorks/COSLO

To: ndeardor@water.ca.gov

Cc: Courtney Howard/PubWorks/COSLO@Wings, Mark Hutchinson/PubWorks/COSLO, Jeff  
Werst/CountyofSLO@Wings, Sylas Cranor/PubWorks/COSLO@Wings, Wendy  
Hall/PubWorks/COSLO@Wings

Archive: This message is being viewed in an archive.

Hello Natalia,

Please find attached the October 2006 progress reports for the four sub-plans of the IRWM Planning Grant for San Luis Obispo County Water Conservation and Flood Control District (District), Grant Agreement No. 4600004505.



G/W Banking Plan Progress Report 10.15.06.doc



Regional Permitting Progress Report 10.15.06.doc



Data Enhancement Progress Report 10.15.06.doc



October 06 Progress Report.doc

If you have any questions please feel free to contact me at the number below.

Thank you,

Doug Bird

Douglas C. Bird

Hydraulic Operations Administrator

Utilities Security Coordinator

Department of Public Works

County of San Luis Obispo

San Luis Obispo, Ca 93408

(805) 781-5116

(805) 459-1230 (cell)

dbird@co.slo.ca.us

Visit Public Works on the Web at: <http://www.slocountypwd.org>

**Grant Agreement No. 4600004505**  
**San Luis Obispo County Flood Control and Water Conservation District (District)**  
**Groundwater Banking Plan Progress Report**  
**July 15, 2006**

**Executive Summary**

This Progress Report for the Groundwater Banking Plan (GWB Plan) portion of Grant Agreement No. 4600004505 summarizes the work performed and cost incurred during the period of January 3, 2006 to July 15, 2006, and provides an updated project schedule. Several public meetings were held in order to inform them of the official execution of the grant agreement, work scope, and methods by which they could be involved in the process. Some preliminary supply analysis has been done to quantify the water available for banking and plan for flow testing of the infrastructure. A draft request for proposals to perform the basin modeling for recharge and extraction (Phase II) was also completed and reviewed by the public. Most of the costs incurred were for District staff labor and amount to approximately \$18,571.61, or 7.4% of the total budget. The schedule is modified to have Phase I: Supply Analysis and Phase III: Stakeholder Review occurring concurrently with Phase II: Basin Modeling.

**Plan Status**

**Phase I: Supply Analysis**

The Department of Water Resources (DWR) publishes a report on the reliability of delivery of State Water to contractors, which averages about 70-75% delivery of requested amounts. Applied to the District's excess allocation of State Water, approximately 12,400 acre-feet per year, on average, may be available for banking. Contact has been made with DWR to begin planning for flow tests of the infrastructure necessary to convey the excess allocation as close to the Basin as possible. Next quarter, plans for flow testing the infrastructure should be firm, and evaluation of inter-agency contracts will begin.

**Phase II: Basin Modeling for Recharge and Extraction**

A request for proposals (RFP) to perform the basin modeling for recharge and extraction was drafted and will be issued for bidding during the week of July 17<sup>th</sup>, 2006. The scope of work is detailed in the RFP as a feasibility study for banking water in the Paso Robles Groundwater Basin (Basin), including preliminary engineering, feasibility analysis, computer model simulation, stakeholder reviews, and a final report. The final report will be due December 1, 2007 in order to complete it before the Grant Agreement termination date of January 2, 2008. Next quarter, the RFP will be advertised and the consultant will be selected.

**Phase III: Stakeholder Review**

In November 2005, a sub-committee (GWB sub-committee) of the Water Resources Advisory Committee (WRAC) was formed, in part, to provide a forum for monitoring the progress of the GWB Plan. The notification list for meetings of this sub-committee includes members of the North County Water Forum, District State Water Sub-Contractors, and other interested members of the public. Meetings were held on February 1, June 7 and July 6, 2006 to discuss the approach to the GWB Plan and to

review the request for proposals to perform the basin modeling for recharge and extraction (Phase II). Two special meetings were held at Polonio Pass Water Treatment Plant and at the Shandon Advisory Committee on April 12, 2006 and May 3, 2006, respectively, in order to notify them of the GWB Plan, educate them on GWB concepts, and explain how they could be involved its development. Next quarter, the GWB sub-committee will be informed of the consultant selection results.

### **Cost Information**

The following costs have been incurred during the period of January 2 through July 15, 2006 for the GWB Plan:

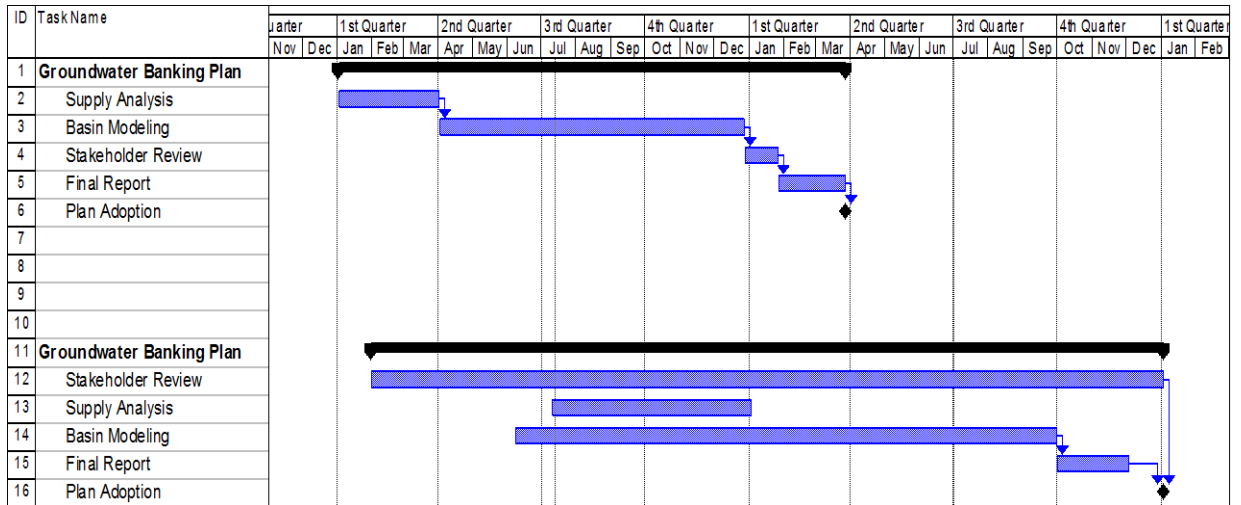
Phase I:	Supply Analysis	\$928.58	10.0 hours
Phase II:	Basin Modeling	\$3,714.32	40.5 hours
Phase III:	Stakeholder Review	\$6,964.36	76.5 Hours
Phase IV:	Project Management	\$6,964.35	76 Hours

The actual budget is progressing according to the original budget; more efforts with Stakeholder Review and Project Management were anticipated in the first two quarters as the project was publicized and initiated. No budget revisions are proposed at this time. Next quarter, there may be adjustments based on consultant bid results and actual supply analysis costs. These adjustments may be covered by savings under the Regional Permitting Plan budget.

### **Schedule Information**

Attached are the original schedule and the revised schedule, which reflects actual progress. Due to District staff reorganization from December 2005 to February 2006, work progress on the Groundwater Banking Plan was slower than anticipated as new staff has needed to get up to speed on the project. The revised schedule also shows the phases progressing concurrently. This will allow the consultant enough time to perform the basin modeling for recharge and extraction (more accurately described as the Groundwater Banking Feasibility Study) and shows how stakeholder review will occur during the whole GWB Plan development process. Work efforts to inform the public and secure the consultant were made a priority; therefore the supply analysis was moved to a later start date.





**Grant Agreement No. 4600004505**  
**San Luis Obispo County Flood Control and Water Conservation District (District)**  
**Groundwater Banking Plan Progress Report**  
**October 15, 2006**

**Executive Summary**

This Progress Report for the Groundwater Banking Plan (GWB Plan) portion of Grant Agreement No. 4600004505 summarizes the work performed and cost incurred during the period of July 16, 2006 to October 15, 2006. The request for proposals to perform the basin modeling for recharge and extraction (Phase II) was advertised, and after reviewing the proposals and interviewing the candidates, GEI Consulting was selected. The \$224,000 contract was awarded on October 3, 2006, and the kick-off meeting with the public was held on October 5, 2006. The project cost through 9/30/06 is \$31,118.90, or 12.4% of the total budget. A revised Agreement budget that shifts funds from the Regional Permitting Plan budget to the Groundwater Banking Plan budget will be submitted for approval next quarter. The schedule has not been modified from the revised schedule submitted in the July quarterly report.

**Plan Status**

**Phase I: Supply Analysis**

The Department of Water Resources (DWR) publishes a report on the reliability of delivery of State Water to contractors, which averages about 70-75% delivery of requested amounts. Applied to the District's excess allocation of State Water, approximately 12,400 acre-feet per year, on average, may be available for banking. Contact has been made with DWR to begin planning for flow tests of the infrastructure necessary to convey the excess allocation as close to the Basin as possible. Plans for flow testing the infrastructure were not confirmed this quarter, but evaluation of inter-agency contracts did begin. The plans for flow testing will be confirmed next quarter, and the flow testing will be performed.

**Phase II: Basin Modeling for Recharge and Extraction**

A request for proposals (RFP) to perform the basin modeling for recharge and extraction was issued for bidding during the week of July 17<sup>th</sup>, 2006. The scope of work was detailed in the RFP as a feasibility study for banking water in the Paso Robles Groundwater Basin (Basin), including preliminary engineering, feasibility analysis, computer model simulation, stakeholder reviews, and a final report. The final report will be due December 1, 2007 in order to complete it before the Grant Agreement termination date of January 2, 2008. After reviewing the proposals and interviewing the top candidates, GEI Consulting (GEI) was awarded the contract for completing the feasibility study. The County Board of Supervisors awarded the \$224,000 contract on October 3, 2006. Next quarter, the budget will be revised to reflect the actual contract amount and associated project efforts and submitted for approval. Additionally, GEI will be submitting a Preliminary Engineering Technical Memorandum for both County and public review and comment in order to establish a common understanding of the project scope, approach and objectives.

### Phase III: Stakeholder Review

In November 2005, a sub-committee (GWB sub-committee) of the Water Resources Advisory Committee (WRAC) was formed, in part, to provide a forum for monitoring the progress of the GWB Plan. The notification list for meetings of this sub-committee includes members of the North County Water Forum, District State Water Sub-Contractors, and other interested members of the public. A project kick-off meeting was held on October 5, 2006. The agenda included introductions of the consulting team and those present, and review of project goals, objectives, work scope, deliverables, schedule, and public participation opportunities. Next quarter, the GWB sub-committee will review and comment on the Preliminary Engineering Technical Memorandum, and discuss it at meetings tentatively scheduled for December 7, 2006 and January 4, 2007. Outreach to landowners in the Paso Robles Groundwater Basin will also be initiated to make sure that they are aware of the study and invite them to participate.

### Cost Information

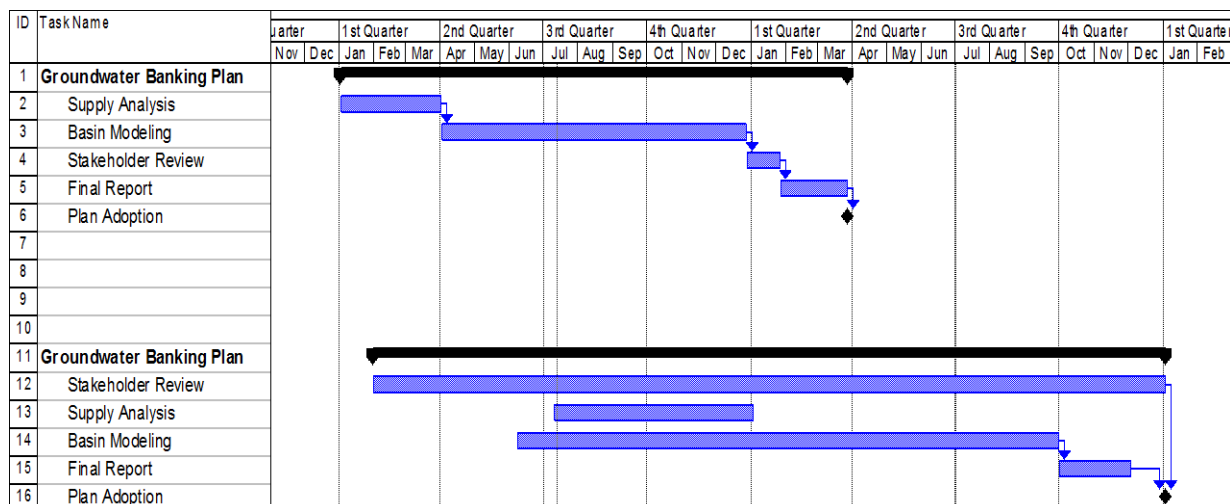
The following costs have been incurred through September 30, 2006 for the GWB Plan:

Phase I:	Supply Analysis	\$4,012.83	44.75 hours
Phase II:	Basin Modeling	\$10,331.44	101.50 hours
Phase III:	Stakeholder Review	\$7,263.93	79.00 Hours
Phase IV:	Project Management	\$9,510.70	102.00 Hours

More efforts with Stakeholder Review and Project Management than anticipated will be necessary for the remainder of the project. The GEI contract was awarded for \$224,000 plus a 10% contingency. Next quarter, a revised budget will be submitted for approval incorporating these changes.

### Schedule Information

Attached are the original schedule and the revised schedule, which reflects actual progress. There are no changes to the schedule this quarter.



**Grant Agreement No. 4600004505**  
**San Luis Obispo County Flood Control and Water Conservation District (District)**  
**Groundwater Banking Plan Progress Report**  
**January 15, 2007**

**Executive Summary**

This Progress Report for the Groundwater Banking Plan (GWB Plan) portion of Grant Agreement No. 4600004505 summarizes the work performed and cost incurred during the period of October 16, 2006 to January 15, 2007. The first submittal, a Preliminary Engineering Technical Memorandum, was submitted by GEI Consulting and reviewed by the Groundwater Banking Subcommittee of the Water Resources Advisory Committee (WRAC) at meetings on December 7, 2006 and January 4, 2007. Next quarter, the consultant will be developing the initial project alternatives and coarse screening criteria. The project cost through December 31, 2006 is \$48,955.56, or 14% of the total budget. A revised Agreement budget that shifts funds from the Regional Permitting Plan budget to the Groundwater Banking Plan budget is included in this quarterly report. The schedule has been modified from the revised schedule submitted in the October quarterly report to reflect the change in scheduling of the supply analysis.

**Plan Status**

**Phase I: Supply Analysis**

The Department of Water Resources (DWR) publishes a report on the reliability of delivery of State Water to contractors, which averages about 70-75% delivery of requested amounts. Applied to the District's excess allocation of State Water, approximately 12,400 acre-feet per year, on average, may be available for banking. Contact has been made with DWR to begin planning for flow tests of the infrastructure necessary to convey the excess allocation as close to the Basin as possible. The plans for flow testing will be confirmed next quarter, and the flow testing will be performed in the spring.

**Phase II: Basin Modeling for Recharge and Extraction**

GEI submitted a Preliminary Engineering Technical Memorandum for both County and public review and comment in order to establish a common understanding of the project scope, approach and objectives. Next quarter, GEI will be developing groundwater banking project alternatives to put through coarse screening, in order to identify the most viable projects for more detailed analysis.

**Phase III: Stakeholder Review**

On December 7, 2006, the GWB sub-committee reviewed and commented on the Preliminary Engineering Technical Memorandum, and the consultant, GEI, addressed those comments on January 4, 2007. The next meeting is scheduled for March 1, 2007 when the initial project alternatives will be presented for review and comment.

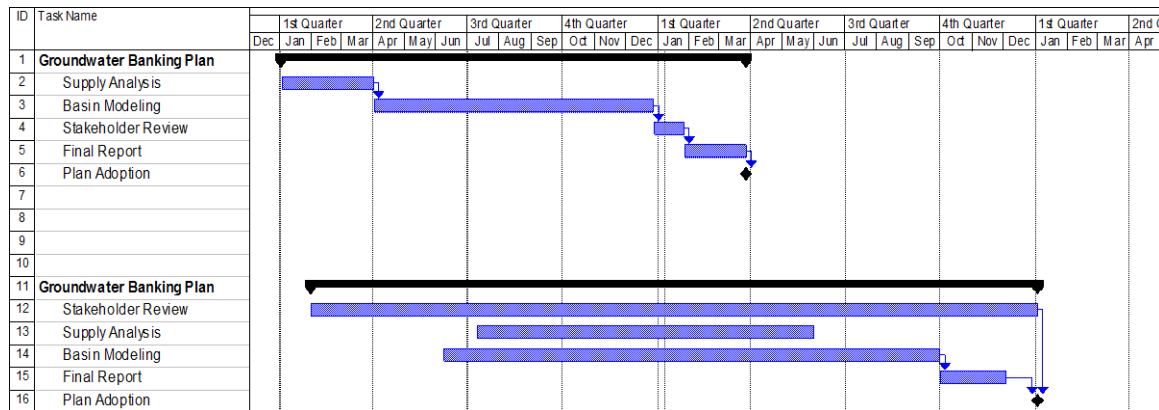
## Cost Information

The following table identifies what costs have been incurred through December 31, 2006 for the GWB Plan. More efforts with Stakeholder Review and Project Management than anticipated will be necessary for the remainder of the project. The GEI contract was awarded for \$224,000 plus a 10% contingency. A revised budget incorporating these changes is included below. Monies were shifted from the Regional Permitting Plan budget.

Description	Revised Grant Amount as of 12/31/06	Revised District Match as of 12/31/06	Total Authorized Grant Amount	Previous Balance (FY 2005-2006)	Prev. Hrs	YTD thru 12/31/06	YTD Hours	Total	Total Hours
Supply Analysis	\$15,000	\$3,676	\$18,676	\$928.58	10.0	\$3,947.35	43.00	\$4,875.93	53.00
Basin Modeling	\$162,500	\$39,824	\$202,324	\$3,714.32	40.5	\$18,311.14	61.00	\$22,025.46	101.50
Stakeholder Review	\$44,000	\$10,783	\$54,783	\$6,964.36	76.0	\$2,696.64	7.50	\$9,661.00	83.50
Final Report	\$12,000	\$2,941	\$14,941	\$0.00	0.0	\$0.00	0.00	\$0.00	0.00
Plan Adoption	\$20,000	\$4,901	\$24,901	\$0.00	0.0	\$0.00	0.00	\$0.00	0.00
Project Management	\$7,500	\$22,500	\$30,000	\$6,964.35	76.5	\$5,428.82	54.00	\$12,393.17	130.50
<b>Sub-Total</b>	<b>\$261,000</b>	<b>\$84,625</b>	<b>\$345,625</b>	<b>\$18,571.61</b>	<b>203.0</b>	<b>\$30,383.95</b>	<b>165.50</b>	<b>\$48,955.56</b>	<b>368.50</b>

## Schedule Information

Attached are the original schedule and the revised schedule, which reflects actual progress. The timeline for the supply analysis has been extended to reflect the flow testing scheduled for the spring.





**Grant Agreement No. 4600004505**  
**San Luis Obispo County Flood Control and Water Conservation District (District)**  
**Groundwater Banking Plan Progress Report**  
**April 15, 2007**

**Executive Summary**

This Progress Report for the Groundwater Banking Plan (GWB Plan) portion of Grant Agreement No. 4600004505 summarizes the work performed and cost incurred during the period of January 16, 2006 to April 15, 2007. GEI Consulting presented the process for identifying the most viable banking alternatives to the Groundwater Banking (GWB) Sub-committee of the Water Resources Advisory Committee (WRAC) at a meeting on March 1, 2007. Next quarter, the consultant will finish putting the initial project alternatives through coarse screening in order to identify the most viable projects for more detailed analysis. The project cost through March 31, 2007 is \$101,688.89, or 29% of the total budget. No changes to the budget or schedule were made during the reporting period.

**Plan Status**

**Phase I: Supply Analysis**

The Department of Water Resources (DWR) publishes a report on the reliability of delivery of State Water to contractors, which averages about 70-75% delivery of requested amounts. Applied to the District's excess allocation of State Water, approximately 12,400 acre-feet per year, on average, may be available for banking. GEI is currently analyzing the monthly availability of water for delivery to a banking project. A flow test on the infrastructure between Devil's Den Pumping Plant and the Polonio Pass Water Treatment Plant to determine the amount of water that can physically be delivered for banking was inadvertently performed after a maintenance shutdown. After review of the data, it was decided to run the test again under more controlled conditions. These tests will be run during the next reporting period, and will be combined with GEI's water availability analysis, in order to evaluate alternatives next quarter.

**Phase II: Basin Modeling for Recharge and Extraction**

GEI has developed groundwater banking project alternatives and is currently putting them through a course screening analysis in order to identify the most viable projects for a more detailed analysis. Concurrently, Fugro and Cleath, subconsultants to GEI, are performing a hydrogeologic analysis to identify the best locations for banking water. Next quarter, GEI will be identifying the most viable projects for more detailed analysis based on the results of current work efforts.

**Phase III: Stakeholder Review**

On March 1, 2007, the GEI presented the course screening process they would use to identify the most viable banking alternatives for a more detailed analysis to the GWB sub-committee. This presentation also presented some examples of alternatives and a summary of the areas in the basin that are hydrogeologically more conducive to banking water. The next meeting is scheduled for May 3, 2007 when the most viable project alternatives, to be analyzed in greater detail, will be presented for review and comment.

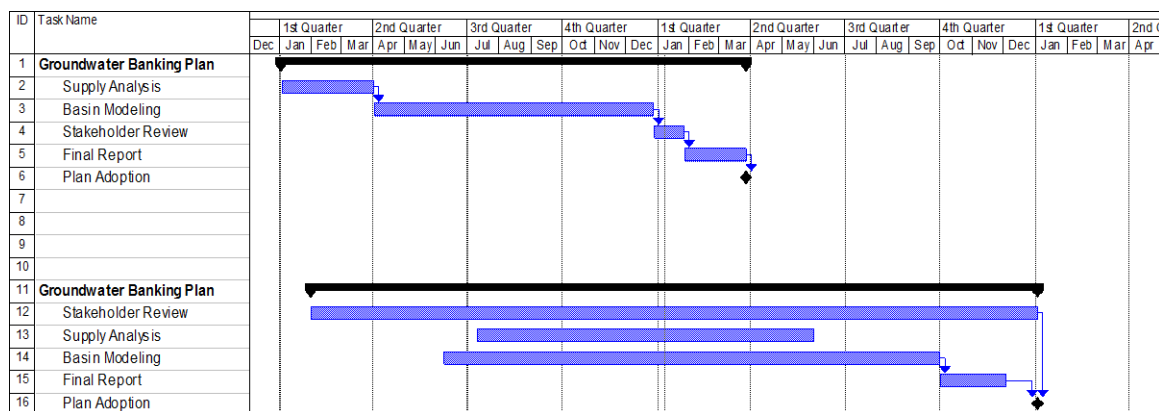
## Cost Information

The following table identifies what costs have been incurred through March 31, 2007 for the GWB Plan. More efforts with Stakeholder Review and Project Management than anticipated will be necessary for the remainder of the project. The GEI contract was awarded for \$224,000 plus a 10% contingency. A revised budget incorporating these changes is included below. Monies were shifted from the Regional Permitting Plan budget.

Description	Revised Grant Amount as of 12/31/06	Revised District Match as of 12/31/06	Total Authorized Grant Amount	Previous Balance (FY 2005-2006)	Prev. Hrs	YTD thru 3/31/07	YTD Hrs	Total	Total Hours
Supply Analysis	\$15,000	\$3,676	\$18,676	\$928.58	10.0	\$6,168.01	65.0	\$7,096.59	75.00
Basin Modeling	\$162,500	\$39,824	\$202,324	\$3,714.32	40.5	\$56,541.75	61.0	\$60,256.07	101.50
Stakeholder Review	\$44,000	\$10,783	\$54,783	\$6,964.36	76.0	\$12,731.91	9.5	\$19,696.27	85.50
Final Report	\$12,000	\$2,941	\$14,941	\$0.00	0.0	\$0.00	0.0	\$0.00	0.00
Plan Adoption	\$20,000	\$4,901	\$24,901	\$0.00	0.0	\$0.00	0.0	\$0.00	0.00
Project Mngmt	\$7,500	\$22,500	\$30,000	\$6,964.35	76.5	\$7,675.61	76.5	\$14,639.96	153.00
<b>Sub-Total</b>	<b>\$261,000</b>	<b>\$84,625</b>	<b>\$345,625</b>	<b>\$18,571.61</b>	<b>203.0</b>	<b>\$83,117.28</b>	<b>212.0</b>	<b>\$101,688.89</b>	<b>415.00</b>

## Schedule Information

Attached are the original schedule and the revised schedule, which reflects actual progress.



**Grant Agreement No. 4600004505**  
**San Luis Obispo County Flood Control and Water Conservation District (District)**  
**Groundwater Banking Plan Progress Report**  
**July 15, 2007**

**Executive Summary**

This Progress Report for the Groundwater Banking Plan (GWB Plan) portion of Grant Agreement No. 4600004505 summarizes the work performed and cost incurred during the period of April 16, 2007, to July 15, 2007. GEI Consulting and District Staff presented the most viable banking alternatives to the Groundwater Banking (GWB) Subcommittee of the Water Resources Advisory Committee (WRAC) on May 3, 2007, and the WRAC and Shandon Advisory Council on June 6, 2007. Next quarter, the consultant team will be completing a more detailed analysis of the viable banking alternatives by running simulations on the Paso Robles Groundwater Basin model. The project cost through June 30, 2007, is \$154,738.79, or 45% of the total budget. No changes to the budget were made during the reporting period. The schedule has been modified to allow more time to complete the supply analysis, as operational conditions have delayed flow testing.

**Plan Status**

**Phase I: Supply Analysis**

The Department of Water Resources (DWR) publishes a report on the reliability of delivery of State Water to contractors, which averages about 70-75% delivery of requested amounts. Applied to the District's excess allocation of State Water, approximately 12,400 acre-feet per year, on average, may be available for banking. GEI has analyzed the monthly availability of water for delivery to a banking project based on the District's excess allocation and historical State Water delivery capabilities. A flow test on the infrastructure between Devil's Den Pumping Plant and the Polonio Pass Water Treatment Plant to determine the amount of water that can physically be delivered for banking was inadvertently performed after a maintenance shutdown. After review of the data, it was decided to run the test again under more controlled conditions. These tests will be run during the next reporting period, and will be combined with GEI's water availability analysis, in order to further evaluate alternatives next quarter.

**Phase II: Basin Modeling for Recharge and Extraction**

The consultant team has identified the most viable locations for a potential groundwater banking program and will apply baseline, recharge and banking scenarios to each location utilizing the groundwater basin model in order to evaluate the feasibility of each location in more detail. Next quarter, the consultant team will present the analysis results in a Progress Report.

**Phase III: Stakeholder Review**

On May 3, 2007, and June 6, 2007, GEI and District Staff presented the most viable banking alternatives for a more detailed analysis to the GWB sub-committee, WRAC, and Shandon Advisory Council. This presentation included the recommended scenarios for utilizing the groundwater basin model, and after receiving comments from the

stakeholders, the scenarios were modified. The next meeting is scheduled for September 6, 2007, when basin modeling results are available to review.

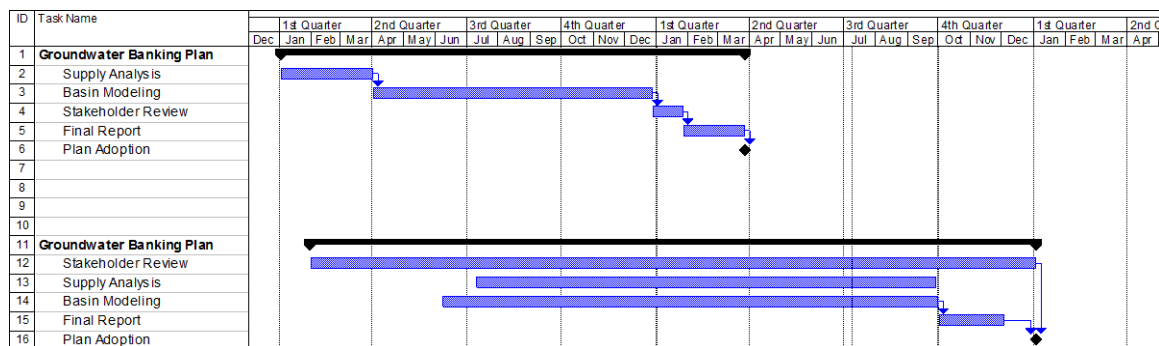
### **Cost Information**

The following table identifies what costs have been incurred through June 30, 2007, for the GWB Plan. Revisions to the budget were presented in the April report.

Description	Revised Grant Amount as of 12/31/06	Revised District Match as of 12/31/06	Total Authorized Grant Amount	Previous Balance (FY 2005-2006)	Prev. Hrs	YTD thru 3/31/07	YTD Hrs	Total	Total Hours
Supply Analysis	\$15,000	\$3,676	\$18,676	\$928.58	10.0	\$6,217.94	65.5	\$7,146.52	75.50
Basin Modeling	\$162,500	\$39,824	\$202,324	\$3,714.32	40.5	\$85,524.91	63.0	\$89,239.23	103.50
Stakeholder Review	\$44,000	\$10,783	\$54,783	\$6,964.36	76.0	\$33,023.57	15.0	\$39,987.93	91.00
Final Report	\$12,000	\$2,941	\$14,941	\$0.00	0.0	\$3,425.57	0.0	\$3,425.57	0.00
Plan Adoption	\$20,000	\$4,901	\$24,901	\$0.00	0.0	\$0.00	0.0	\$0.00	0.00
Project Mngmt	\$7,500	\$22,500	\$30,000	\$6,964.35	76.5	\$7,975.19	79.5	\$14,939.54	156.00
<b>Sub-Total</b>	<b>\$261,000</b>	<b>\$84,625</b>	<b>\$345,625</b>	<b>\$18,571.61</b>	<b>203.0</b>	<b>\$136,167.18</b>	<b>223.0</b>	<b>\$154,738.79</b>	<b>426.00</b>

### **Schedule Information**

Attached are the original schedule and the revised schedule, which reflects actual progress and the modification to supply analysis timing.



**Grant Agreement No. 4600004505**  
**San Luis Obispo County Flood Control and Water Conservation District (District)**  
**Groundwater Banking Plan Progress Report**  
**January 15, 2008**

**Executive Summary**

This Progress Report for the Groundwater Banking Plan (GWB Plan) portion of Grant Agreement No. 4600004505 summarizes the work performed and cost incurred during the period of October 16, 2007, to December 31, 2007. GEI Consulting conducted an engineering analysis of the viable locations and presenting the Draft Final Report to the WRAC, Shandon Advisory Committee and the Creston Advisory Body. Next quarter, the consultant will be incorporating comments received on the Draft Final Report into the Final Report. The project cost through December 31, 2007, is \$266,154.43, or 77% of the total budget. The schedule was extended during this reporting period to finish incorporating the comments into the Final Report.

**Plan Status**

**Phase I: Supply Analysis (Complete)**

The Department of Water Resources (DWR) publishes a report on the reliability of delivery of State Water to contractors, which averages about 70-75% delivery of requested amounts. Applied to the District's excess allocation of State Water, approximately 12,400 acre-feet per year, on average, may be available for banking. GEI has analyzed the monthly availability of water for delivery to a banking project based on the District's excess allocation and historical State Water delivery capabilities. A flow test on the infrastructure between Devil's Den Pumping Plant and the Polonio Pass Water Treatment Plant to determine the amount of water that can physically be delivered for banking was inadvertently performed after a maintenance shutdown. After review of the data, it was decided to run the test again under more controlled conditions. However, due to operational issues on the State Water Project and timing constraints, theoretical values for infrastructure capacity will be used in GEI's engineering analysis for the Draft Final Report. The District has initiated regular meetings with local agencies that take State Water and the Central Coast Water Authority to scope the supply analysis outside of this project.

**Phase II: Basin Modeling for Recharge and Extraction (Complete)**

The consultant team applied cost estimates for the most viable locations for a potential groundwater banking program and presented the hydrogeological and engineering analysis results in a Draft Final Report. Comments collected on the draft will be incorporated into a final report.

**Phase III: Stakeholder Review (Complete)**

GEI presented the Draft Final Report to the WRAC and Shandon Advisory Committee on November 7, 2007, and to the Creston Advisory Body on November 14, 2007. Comments from these stakeholders will be incorporated into the Final Report.



Phase IV: Final Report

Comments collected from the stakeholder review process will be incorporated in to the Final Report.

Phase V: Plan Adoption

Critical components of the Final Report will be incorporated into the County's adopted IRWM Plan as provided for in its five-year update schedule.

**Cost Information**

The following table identifies what costs have been incurred through December 31, 2007, for the GWB Plan.

**Schedule Information**

Attached are the original schedule and the revised schedule, which reflects actual progress.

Description	Revised Grant Amount as of 12/31/06	Revised District Match as of 12/31/06	Total Authorized Grant Amount	Previous Balance (FY 2005-2006)	FY 05/06 Hours	Previous Balance (FY 2006/2007)	FY 06/07 Hours	YTD thru 12/31/07	YTD Hours	Total Costs	Total Hours
<b>Groundwater Banking Plan</b>											
Supply Analysis	\$15,000	\$3,676	\$18,676	\$928.58	10.0	\$6,217.94	65.50	\$385.42	3.00	\$7,531.94	78.50
Basin Modeling	\$162,500	\$39,824	\$202,324	\$3,714.32	40.5	\$85,524.91	63.00	\$94,482.64	18.50	\$183,721.87	122.00
Stakeholder Review	\$44,000	\$10,783	\$54,783	\$6,964.36	76.0	\$33,023.57	15.00	\$11,545.03	20.50	\$51,532.96	111.50
Final Report	\$12,000	\$2,941	\$14,941	\$0.00	0.0	\$3,425.57	0.00	\$382.45	3.00	\$3,808.02	3.00
Plan Adoption	\$20,000	\$4,901	\$24,901	\$0.00	0.0	\$0.00	0.00	\$0.00	0.00	\$0.00	0.00
Project Management	\$7,500	\$22,500	\$30,000	\$6,964.35	76.5	\$7,975.19	79.50	\$4,620.10	45.00	\$19,559.64	201.00
<b>Sub-Total</b>	<b>\$261,000</b>	<b>\$84,625</b>	<b>\$345,625</b>	<b>\$18,571.61</b>	<b>203.0</b>	<b>\$136,167.18</b>	<b>223.00</b>	<b>\$111,415.64</b>	<b>90.00</b>	<b>\$266,154.43</b>	<b>516.00</b>

ID	Task Name	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Q		
		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
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2	Supply Analysis																																	
3	Basin Modeling																																	
4	Stakeholder Review																																	
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12	Stakeholder Review																																	
13	Supply Analysis																																	
14	Basin Modeling																																	
15	Final Report																																	
16	Plan Adoption																																	

**Grant Agreement No. 4600004505**  
**San Luis Obispo County Flood Control and Water Conservation District (District)**  
**Groundwater Banking Plan Progress Report**  
**January 15, 2008**

**Executive Summary**

This Progress Report for the Groundwater Banking Plan (GWB Plan) portion of Grant Agreement No. 4600004505 summarizes the work performed and cost incurred during the period of October 16, 2007, to December 31, 2007. GEI Consulting conducted an engineering analysis of the viable locations and presenting the Draft Final Report to the WRAC, Shandon Advisory Committee and the Creston Advisory Body. Next quarter, the consultant will be incorporating comments received on the Draft Final Report into the Final Report. The project cost through December 31, 2007, is \$266,154.43, or 77% of the total budget. The schedule was extended during this reporting period to finish incorporating the comments into the Final Report.

**Plan Status**

**Phase I: Supply Analysis (Complete)**

The Department of Water Resources (DWR) publishes a report on the reliability of delivery of State Water to contractors, which averages about 70-75% delivery of requested amounts. Applied to the District's excess allocation of State Water, approximately 12,400 acre-feet per year, on average, may be available for banking. GEI has analyzed the monthly availability of water for delivery to a banking project based on the District's excess allocation and historical State Water delivery capabilities. A flow test on the infrastructure between Devil's Den Pumping Plant and the Polonio Pass Water Treatment Plant to determine the amount of water that can physically be delivered for banking was inadvertently performed after a maintenance shutdown. After review of the data, it was decided to run the test again under more controlled conditions. However, due to operational issues on the State Water Project and timing constraints, theoretical values for infrastructure capacity will be used in GEI's engineering analysis for the Draft Final Report. The District has initiated regular meetings with local agencies that take State Water and the Central Coast Water Authority to scope the supply analysis outside of this project.

**Phase II: Basin Modeling for Recharge and Extraction (Complete)**

The consultant team applied cost estimates for the most viable locations for a potential groundwater banking program and presented the hydrogeological and engineering analysis results in a Draft Final Report. Comments collected on the draft will be incorporated into a final report.

**Phase III: Stakeholder Review (Complete)**

GEI presented the Draft Final Report to the WRAC and Shandon Advisory Committee on November 7, 2007, and to the Creston Advisory Body on November 14, 2007. Comments from these stakeholders will be incorporated into the Final Report.

Phase IV: Final Report

Comments collected from the stakeholder review process will be incorporated in to the Final Report.

Phase V: Plan Adoption

Critical components of the Final Report will be incorporated into the County's adopted IRWM Plan as provided for in its five-year update schedule.

**Cost Information**

The following table identifies what costs have been incurred through December 31, 2007, for the GWB Plan.

**Schedule Information**

Attached are the original schedule and the revised schedule, which reflects actual progress.

Description	Revised Grant Amount as of 12/31/06	Revised District Match as of 12/31/06	Total Authorized Grant Amount	Previous Balance (FY 2005-2006)	FY 05/06 Hours	Previous Balance (FY 2006/2007)	FY 06/07 Hours	YTD thru 12/31/07	YTD Hours	Total Costs	Total Hours
<b>Groundwater Banking Plan</b>											
Supply Analysis	\$15,000	\$3,676	\$18,676	\$928.58	10.0	\$6,217.94	65.50	\$385.42	3.00	\$7,531.94	78.50
Basin Modeling	\$162,500	\$39,824	\$202,324	\$3,714.32	40.5	\$85,524.91	63.00	\$94,482.64	18.50	\$183,721.87	122.00
Stakeholder Review	\$44,000	\$10,783	\$54,783	\$6,964.36	76.0	\$33,023.57	15.00	\$11,545.03	20.50	\$51,532.96	111.50
Final Report	\$12,000	\$2,941	\$14,941	\$0.00	0.0	\$3,425.57	0.00	\$382.45	3.00	\$3,808.02	3.00
Plan Adoption	\$20,000	\$4,901	\$24,901	\$0.00	0.0	\$0.00	0.00	\$0.00	0.00	\$0.00	0.00
Project Management	\$7,500	\$22,500	\$30,000	\$6,964.35	76.5	\$7,975.19	79.50	\$4,620.10	45.00	\$19,559.64	201.00
<b>Sub-Total</b>	<b>\$261,000</b>	<b>\$84,625</b>	<b>\$345,625</b>	<b>\$18,571.61</b>	<b>203.0</b>	<b>\$136,167.18</b>	<b>223.00</b>	<b>\$111,415.64</b>	<b>90.00</b>	<b>\$266,154.43</b>	<b>516.00</b>

ID	Task Name	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Q		
		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
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**Grant Agreement No. 4600004505**  
**San Luis Obispo County Flood Control and Water Conservation District (District)**  
**Groundwater Banking Plan Progress Report**  
**April 15, 2008**

**Executive Summary**

This Progress Report for the Groundwater Banking Plan (GWB Plan) portion of Grant Agreement No. 4600004505 summarizes the work performed and cost incurred during the period of January 16, 2008, to March 31, 2007. GEI Consulting incorporated comments received on the Draft Final Report into the Final Report. Next quarter, County staff will be preparing a report to the County Board of Supervisors summarizing the results and recommending next steps, as well as coordinating a flow test with other Coastal Branch agencies. The project cost through March 31, 2008, is \$297,331.20, or 86% of the total budget. The schedule was modified during this reporting period to reflect the scheduled flow testing for Phase I - Supply Analysis.

**Plan Status**

Phase I: Supply Analysis (reinstated)

The Department of Water Resources (DWR) publishes a report on the reliability of delivery of State Water to contractors, which averages about 70-75% delivery of requested amounts. Applied to the District's excess allocation of State Water, approximately 12,400 acre-feet per year, on average, may be available for banking. GEI has analyzed the monthly availability of water for delivery to a banking project based on the District's excess allocation and historical State Water delivery capabilities. A flow test on the infrastructure between Devil's Den Pumping Plant and the Polonio Pass Water Treatment Plant to determine the amount of water that can physically be delivered for banking was inadvertently performed after a maintenance shutdown. After review of the data, it was decided to run the test again under more controlled conditions. However, due to operational issues on the State Water Project and timing constraints, theoretical values for infrastructure capacity were used in GEI's engineering analysis for the Draft Final Report. The District had initiated regular meetings with local agencies that take State Water and the Central Coast Water Authority to scope the supply analysis outside of this project. However, other interests on the Coastal Branch have succeeded in coordinating a flow test from the aqueduct to Polonio Pass, tentatively scheduled for this spring.

Phase IV: Final Report

Comments collected from the stakeholder review process were incorporated in to the Final Report, currently in production.

Phase V: Plan Adoption

Critical components of the Final Report will be incorporated into the County's adopted IRWM Plan as provided for in its five-year update schedule. County staff will also be presenting the results to the Board of Supervisors in coordination with the Resource Capacity Study being conducted in a portion of the Basin.

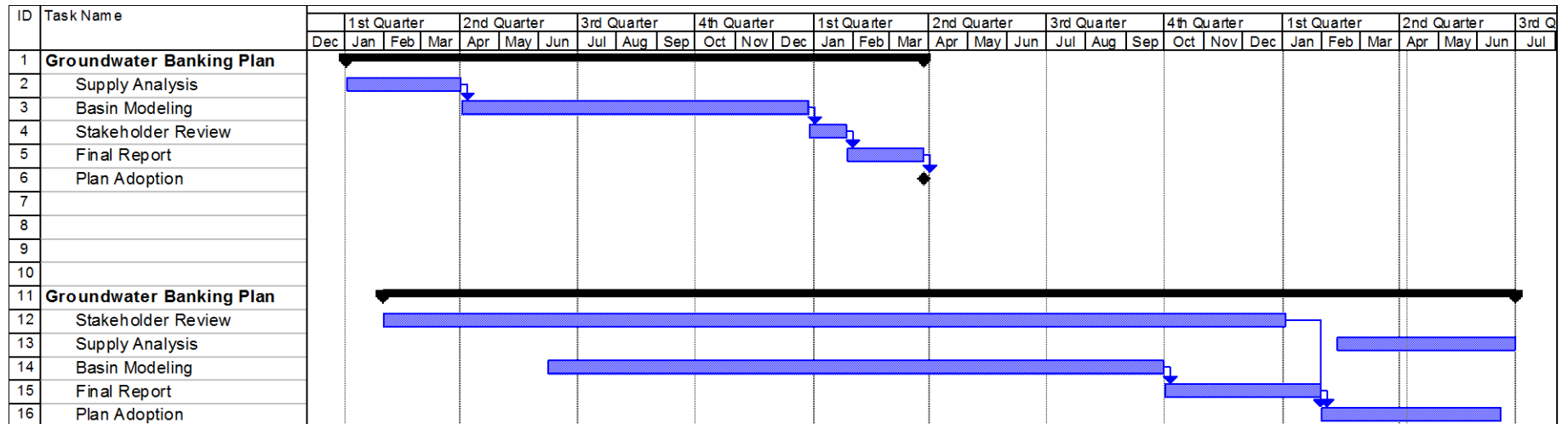
### **Cost Information**

The following table identifies what costs have been incurred through March 31, 2008, for the GWB Plan.

### **Schedule Information**

Attached are the original schedule and the revised schedule, which reflects actual progress.

Description	Revised Grant Amount as of 12/31/06	Revised District Match as of 12/31/06	Total Authorized Grant Amount	Previous Balance (FY 2005-2006)	FY 05/06 Hours	Previous Balance (FY 2006/2007)	FY 06/07 Hours	YTD thru 12/31/07	YTD Hours	Total Costs	Total Hours
<b>Groundwater Banking Plan</b>											
Supply Analysis	\$15,000	\$3,676	\$18,676	\$928.58	10.0	\$6,217.94	65.50	\$642.37	5.00	\$7,788.89	80.50
Basin Modeling	\$162,500	\$39,824	\$202,324	\$3,714.32	40.5	\$85,524.91	63.00	\$111,342.34	18.50	\$200,581.57	122.00
Stakeholder Review	\$44,000	\$10,783	\$54,783	\$6,964.36	76.0	\$33,023.57	15.00	\$20,315.81	20.50	\$60,303.74	111.50
Final Report	\$12,000	\$2,941	\$14,941	\$0.00	0.0	\$3,425.57	0.00	\$5,466.45	11.00	\$8,892.02	11.00
Plan Adoption	\$20,000	\$4,901	\$24,901	\$0.00	0.0	\$0.00	0.00	\$0.00	0.00	\$0.00	0.00
Project Management	\$7,500	\$22,500	\$30,000	\$6,964.35	76.5	\$7,975.19	79.50	\$4,825.44	47.00	\$19,764.98	203.00
<b>Sub-Total</b>	<b>\$261,000</b>	<b>\$84,625</b>	<b>\$345,625</b>	<b>\$18,571.61</b>	<b>203.0</b>	<b>\$136,167.18</b>	<b>223.00</b>	<b>\$142,592.41</b>	<b>102.00</b>	<b>\$297,331.20</b>	<b>528.00</b>



**Grant Agreement No. 4600004505**  
**San Luis Obispo County Flood Control and Water Conservation District (District)**  
**Groundwater Banking Plan Progress Report**  
**July 15, 2008**

**Executive Summary**

This Progress Report for the Groundwater Banking Plan (GWB Plan) portion of Grant Agreement No. 4600004505 summarizes the work performed and cost incurred during the period of April 16, 2008, to June 30, 2008. No work on the GWB Plan was completed in this quarter. Next quarter, County staff will be preparing a report to the County Board of Supervisors summarizing the results and recommending next steps, as well as coordinating a flow test with other Coastal Branch agencies. The project cost through June 30, 2008, is \$324,590.53, or 94% of the total budget. The schedule was modified during this reporting period to reflect the scheduled flow testing for Phase I - Supply Analysis.

**Plan Status**

Phase I:        Supply Analysis

The County and the Central Coast Water Authority continue to coordinate with DWR on scheduling flow testing along the coastal branch of the State Water pipeline.

Phase IV:      Final Report

The Final Report is being sent to DWR staff.

Phase V:        Plan Adoption

Critical components of the Final Report will be incorporated into the County's adopted IRWM Plan as provided for in its five-year update schedule. County staff will also be presenting the results to the Board of Supervisors in coordination with the Resource Capacity Study being conducted in a portion of the Basin.

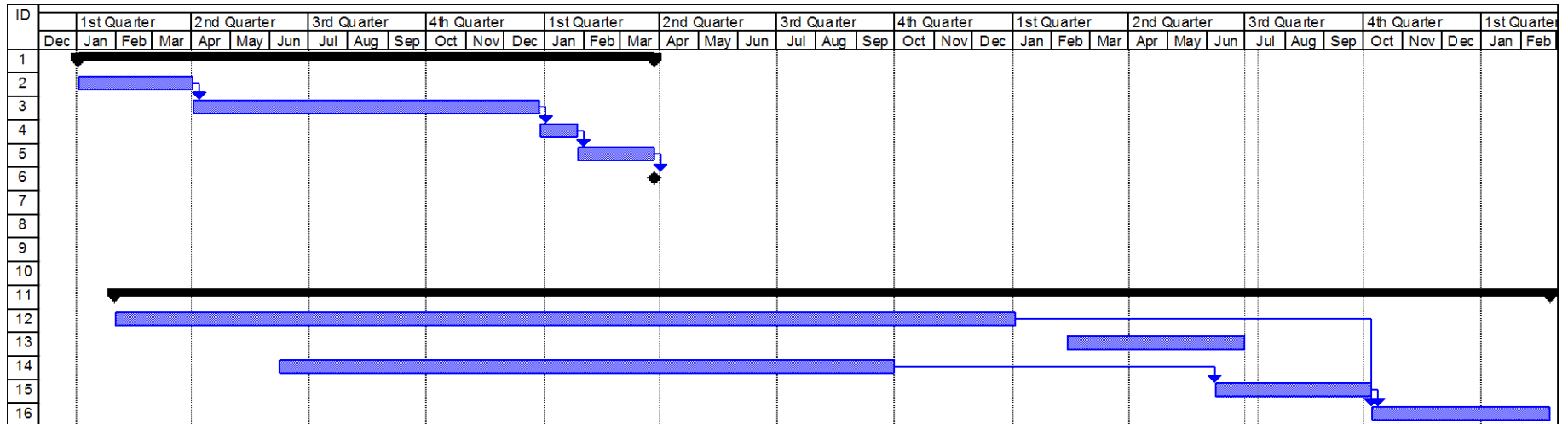
**Cost Information**

The following table identifies what costs have been incurred through June 30, 2008, for the GWB Plan.

**Schedule Information**

Attached are the original schedule and the revised schedule, which reflects actual progress.

Description	Revised Grant Amount as of 12/31/06	Revised District Match as of 12/31/06	Total Authorized Grant Amount	Previous Balance (FY 2005-2006)	FY 05/06 Hours	Previous Balance (FY 2006/2007)	FY 06/07 Hours	YTD thru 6/30/08	YTD Hours	Total Costs	Total Hours
<b>Groundwater Banking Plan</b>											
Supply Analysis	\$15,000	\$3,676	\$18,676	\$928.58	10.0	\$6,217.94	65.50	\$642.37	5.00	\$7,788.89	80.50
Basin Modeling	\$162,500	\$39,824	\$202,324	\$3,714.32	40.5	\$85,524.91	63.00	\$127,348.14	18.50	\$216,587.37	122.00
Stakeholder Review	\$44,000	\$10,783	\$54,783	\$6,964.36	76.0	\$33,023.57	15.00	\$20,315.81	20.50	\$60,303.74	111.50
Final Report	\$12,000	\$2,941	\$14,941	\$0.00	0.0	\$3,425.57	0.00	\$15,604.56	11.00	\$19,030.13	11.00
Plan Adoption	\$20,000	\$4,901	\$24,901	\$0.00	0.0	\$0.00	0.00	\$704.75	5.00	\$704.75	5.00
Project Management	\$7,500	\$22,500	\$30,000	\$6,964.35	76.5	\$7,975.19	79.50	\$5,236.11	51.00	\$20,175.65	207.00
<b>Sub-Total</b>	<b>\$261,000</b>	<b>\$84,625</b>	<b>\$345,625</b>	<b>\$18,571.61</b>	<b>203.0</b>	<b>\$136,167.18</b>	<b>223.00</b>	<b>\$169,851.74</b>	<b>111.00</b>	<b>\$324,590.53</b>	<b>537.00</b>





**Grant Agreement No. 4600004505**  
**San Luis Obispo County Flood Control and Water Conservation District (District)**  
**Groundwater Banking Plan Progress Report**  
**October 15, 2008**

**Executive Summary**

This Progress Report for the Groundwater Banking Plan (GWB Plan) portion of Grant Agreement No. 4600004505 summarizes the work performed and cost incurred during the period of July 16, 2008, to September 30, 2008. Work on the GWB Plan has been completed. County staff will now be utilizing the report both to update and re-adopt our region's IRWM Plan and as an option to address declining groundwater levels in the western portion of the Paso Robles Groundwater Basin. Due to challenges with prioritizing and staffing a flow test of the Coastal Branch during the development of the GWB Plan, the Supply Analysis is limited to what is included in the GWB Plan. The project cost through September 30, 2008, is \$325,492.84, or 94% of the total budget. The schedule was modified during this reporting period to reflect the actual schedule for Phase I - Supply Analysis.

**Plan Status**

**Phase I: Supply Analysis**

The County and the Central Coast Water Authority continue to coordinate with DWR on scheduling flow testing along the coastal branch of the State Water pipeline outside the scope of GWB Plan development. An analysis based on operational history and infrastructure design records was completed earlier in the development of the GWB Plan.

All four phases under the Grant Agreement Work Plan for the GWB Plan have been completed. Critical components of the Final Report will be incorporated into the County's adopted IRWM Plan in conjunction with other changes needed as a result of new Proposition 84 guidelines. In January, County staff will also be presenting the results to the Board of Supervisors in coordination with the Resource Capacity Study being conducted in a portion of the Paso Robles Groundwater Basin.

**Cost Information**

The following table identifies what costs have been incurred through September 30, 2008, for the GWB Plan.

**Schedule Information**

Attached are the original schedule and the revised schedule, which reflects actual progress.

Description	Revised Grant Amount as of 12/31/06	Revised District Match as of 12/31/06	Total Authorized Grant Amount	Previous Balance (FY 2005-2006)	FY 05/06 Hours	Previous Balance (FY 2006/2007)	FY 06/07 Hours
<b>Groundwater Banking Plan</b>							
Supply Analysis	\$15,000	\$3,676	\$18,676	\$928.58	10.0	\$6,217.94	65.50
Basin Modeling	\$162,500	\$39,824	\$202,324	\$3,714.32	40.5	\$85,524.91	63.00
Stakeholder Review	\$44,000	\$10,783	\$54,783	\$6,964.36	76.0	\$33,023.57	15.00
Final Report	\$12,000	\$2,941	\$14,941	\$0.00	0.0	\$3,425.57	0.00
Plan Adoption	\$20,000	\$4,901	\$24,901	\$0.00	0.0	\$0.00	0.00
Project Management	\$7,500	\$22,500	\$30,000	\$6,964.35	76.5	\$7,975.19	79.50
<b>Sub-Total</b>	<b>\$261,000</b>	<b>\$84,625</b>	<b>\$345,625</b>	<b>\$18,571.61</b>	<b>203.0</b>	<b>\$136,167.18</b>	<b>223.00</b>

Description	Previous Balance (FY 2007/2008)	FY 07/08 Hours	YTD thru 6/30/08	YTD Hours	Total Costs	Total Hours
<b>Groundwater Banking Plan</b>						
Supply Analysis	\$642.37	5.00			\$7,788.89	80.50
Basin Modeling	\$127,348.14	18.50	\$0.00	0.00	\$216,587.37	122.00
Stakeholder Review	\$20,315.81	20.50	\$0.00	0.00	\$60,303.74	111.50
Final Report	\$15,604.56	11.00	\$0.00	0.00	\$19,030.13	11.00
Plan Adoption	\$704.75	5.00	\$0.00	0.00	\$930.33	7.00
Project Management	\$5,236.11	51.00	\$225.58	2.00	\$20,852.38	213.00
<b>Sub-Total</b>	<b>\$169,851.74</b>	<b>111.00</b>	<b>\$676.73</b>	<b>6.00</b>	<b>\$325,492.84</b>	<b>545.00</b>

ID	Task Name	Timeline (2023-2024)																	
		1st Half	1st Half		2nd Half		1st Half		2nd Half		1st Half		2nd Half		1st Half		2nd Half		
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1	<b>Groundwater Banking Plan</b>																		
2	Supply Analysis																		
3	Basin Modeling																		
4	Stakeholder Review																		
5	Final Report																		
6	Plan Adoption																		
7																			
8																			
9																			
10																			
11	<b>Groundwater Banking Plan</b>																		
12	Stakeholder Review																		
13	Supply Analysis																		
14	Basin Modeling																		
15	Final Report																		
16	Plan Adoption																		

## **Exhibit E**



# SAN LUIS OBISPO COUNTY DEPARTMENT OF PUBLIC WORKS

Noel King, Director

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County Government Center, Room 207 • San Luis Obispo CA 93408 • (805) 781-5252

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Fax (805) 781-1229

email address: [pwd@co.slo.ca.us](mailto:pwd@co.slo.ca.us)

November 7, 2007

Natalia E. Deardorff  
Division of Planning and Local Assistance  
Department of Water Resources  
PO Box 942836  
Sacramento, CA 95814

Subject: Planning Grant Agreement No. 460000450 SLOCFC&WCD Deadline  
Extension Request

Dear Ms. Deardorff:

The purpose of this letter is to request a six month time extension for the San Luis Obispo County Flood Control and Water Conservation District ("District") Planning Grant Agreement No. 460000450. The extension is necessary to provide District staff with adequate time to complete the final work products associated with the individual planning grant components currently in process under our Grant Agreement with your agency.

As has been mentioned in previous status reports submitted to you, the County Public Works Department went through a major reorganization in the months following execution of the Grant Agreement. While the reorganization was intended, among other things, to provide additional staff resources to work on the planning grant projects, the practical realities of implementing the reorganization coupled with increased demand on current staff due to the advent of major unanticipated projects (such as the Los Osos Wastewater Project with the signing of Assembly Bill 2701) has contributed to the need for this request for a time extension. We feel that it is important to continue to maximize the use of District staff in order to develop in-house knowledge and stay within budget, and extension of the Agreement deadline would help facilitate this. Please note, however, that we would like to use consultant help to complete the Regional Permitting Plan and Data Enhancement Plan, as those efforts are complete in concept but require additional efforts to bring all of their respective elements together.



Please let me know if this time extension request is acceptable to you. Do not hesitate to contact me should you have any questions or wish to discuss this further.

Sincerely,

A handwritten signature in black ink, appearing to read 'Douglas Bird', with a stylized, cursive script.

DOUGLAS BIRD

Hydraulic Operations Administrator

c: Dean Benedix, Utilities Division Manager  
Paavo Ogren, Deputy Director  
Mark Hutchinson, Environmental Permits Division Manager  
Courtney Howard, Water Resources Unit Senior Engineer  
Jeff Werst, Hydraulic Planning Unit Senior Engineer  
Sycas Cranor, Water Resources Engineer

File: CF 900.35.01

L:\UTILITY\NOV07\Time Extension Request 11-1-07.doc.ch.taw



SAN LUIS OBISPO COUNTY  
**DEPARTMENT OF PUBLIC WORKS**

Paavo Ogren, Director

County Government Center, Room 207 • San Luis Obispo, CA 93408 • (805) 781-5252

Fax (805) 781-1229

email address: [pwd@co.slo.ca.us](mailto:pwd@co.slo.ca.us)

May 22, 2008

Natalia E. Deardorff  
Division of Planning and Local Assistance  
Department of Water Resources  
PO Box 942836  
Sacramento, CA 95814

Subject: Planning Grant Agreement No. 460000450 San Luis Obispo County Flood  
Control & Water Conservation District Deadline Extension Request


Dear Ms. Deardorff:

The purpose of this letter is to request a six month time extension for the San Luis Obispo County Flood Control and Water Conservation District ("District") Planning Grant Agreement No. 460000450. The extension is necessary to provide District staff with adequate time to complete the final work products associated with the individual planning grant components currently in process under our Grant Agreement with your agency.

As has been mentioned in previous status reports submitted to you, two of the four plan components are complete, or nearly complete, and will be integrated into our region's IRWM Plan. The other two plan components have required additional time in order to ensure adequate stakeholder participation and to partially utilize consultant resources. We feel that it is important to continue to maximize the use of District staff in order to develop in-house knowledge and stay within budget, and extension of the Agreement deadline would help facilitate this.

Thank you for the opportunity to submit this time extension request. Do not hesitate to contact me should you have any questions or wish to discuss this further.

Sincerely,

  
DOUGLAS BIRD  
Hydraulic Operations Administrator

c: Paavo Ogren, Director of Public Works  
Dean Benedix, Utilities Division Manager  
Mark Hutchinson, Environmental Permits Division Manager  
Courtney Howard, Water Resources Unit Senior Engineer  
Jeff Werst, Design Division Manager  
Sycas Cranor, Water Resources Engineer

File: CF 900.35.01

## **Exhibit F**

**MEMORANDUM OF UNDERSTANDING  
PASO ROBLES REGIONAL GROUNDWATER MANAGEMENT PLAN**

This Memorandum of Understanding ("MOU") is made and entered into this 15<sup>th</sup> day of December, 2009, by and among the CITY OF PASO ROBLES (the "City") and the SAN LUIS OBISPO COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT (the "District").

**RECITALS**

- A. The City submitted an application to the State of California Department of Water Resources ("DWR") for a grant from the Local Groundwater Assistance Fund to facilitate the preparation and adoption of a regional groundwater management plan ("GWMP").
- B. The GWMP's purpose is to identify specific actions that can contribute to the long-term sustainability of the Paso Robles Groundwater Basin (the "Basin"), the sole source of water supply for a significant portion of San Luis Obispo County and the southern portion of Monterey County, and particularly critical to the region's healthy agribusiness.
- C. The DWR awarded the City \$208,000 in grant funds to facilitate the GWMP's development, which will occur through an open and public process to provide local groundwater users, water purveyors, stakeholders, and interested parties the opportunity to participate.
- D. The City and the District will collaborate in building upon past and existing efforts to address the Basin's groundwater management issues, and both entities will benefit from the development of a management strategy that will preserve groundwater resources and ensure its availability to meet current and future water needs in the region.
- E. As outlined in the grant application, the City and the District shall each have specific obligations to promote the project's completion as well as to ensure compliance with DWR standards.
- F. The purpose of this MOU is to more particularly set forth the agreements of the parties with respect to their obligations in connection with the preparation of the GWMP, as specified in the grant application.
- G. While nothing in this MOU legally requires that the GWMP be adopted by the governing body of the City, District or any other local government agency, it is the mutual desire of both the City and District that a GWMP be developed under this MOU that is mutually acceptable to the parties.



Now, therefore, the City and the District agree as follows:

## **AGREEMENTS**

1. Lead Agency. The City is the lead agency for purposes of administering the grant and providing contract administration.
2. Compliance with DWR Requirements and Conditions. The City and the District both agree that while the City is ultimately responsible for ensuring compliance with grant terms and conditions, the District will cooperate with the City in meeting those terms and conditions expeditiously and to the satisfaction of the DWR. District agrees that it shall be responsible for seeking input and assistance from County of San Luis Obispo ("County") staff for certain tasks, as described below, in furtherance of this MOU and the project.
3. Use of Consultants. As specified in the grant application, the scope of work and estimated level of effort assumes that a qualified consulting firm, or firms, familiar with the hydrogeologic setting of the Basin will complete most of the technical work.
  - 3.1. Consultant Hiring. The City will form a review panel, comprised of individuals that both the City and the District agree upon, to select a consultant that meets the approval of both the City and the District.
  - 3.2. Consultant Project Manager. The consultant's project manager should be a California registered geologist or certified hydrogeologist with several years of experience preparing groundwater management plans and developing groundwater monitoring networks in California.
  - 3.3. Consultant Remuneration. The consultant will submit monthly invoices to the City and the City will pay the consultant from grant funds. The City will seek reimbursement from the DWR on a quarterly basis.
4. Delegation of Tasks. The grant application sets forth a work plan outlining the tasks and obligations of each party to further the GWMP's completion and adoption, and to update the regional groundwater monitoring plan. The City will manage and direct the project scope of work with support from the District and the consulting team. The City will provide the District an opportunity to review and comment on all project deliverables.
  - 4.1. Administrative Requirements of Groundwater Management Plan Process. This task involves completing the administrative requirements to prepare and adopt a groundwater management plan.
  - 4.2. Public Outreach and Stakeholder Involvement. This task entails establishing a regional Paso Robles Basin Groundwater Advisory Committee (Committee), with the necessary stakeholder and public involvement. This activity includes regularly scheduled meetings, briefings, and newsletter circulations.



4.3. Identify Groundwater Issues and Develop Basin Management Objectives ("BMOs").

This task implicates the identification of groundwater issues that support the development of BMOs for the Basin. The consulting team will lead this task, and work with District staff and San Luis Obispo County Planning Department staff. The consulting team will conduct an independent technical review of this task, further described in 4.7. below, and deliver a technical memorandum documenting the groundwater issues and provisional BMOs for each subarea.

4.4. Water Demand and Supply Analysis. This task entails coordinating with the other scheduled water resources planning efforts to develop the regional land and water use data and water supply setting for the Plan Area. The consulting team will lead the technical analysis, coordinating with both the County's Planning Department and Public Works Department. The consulting team will conduct an independent technical review of this task, further described in 4.7. below, and will deliver a technical memorandum documenting the existing and expected future land and water use conditions. The purpose of this task is to use readily available information to document current and future land use, water resource policies and associated water use in the Basin. That information stems from the following three County projects:

4.4.1. Resource Capacity Study. In 2007, the County directed its staff to prepare a Resource Capacity Study focusing on the groundwater level decrease in the western portion of the Basin. County Planning Department staff will be responsible for completing the Resource Capacity Study. This task will support the Resource Capacity Study and to that end the consulting team will coordinate with the County Planning Department.

4.4.2. Conservation Element of the County General Plan. The County Planning Department will update the Conservation and Open Space Element of the County General Plan to improve, consolidate, and revise the existing policies and programs, including those related to water resources. County Planning Department staff will be responsible for completing the Conservation Element. The work completed pursuant to this task will be supported by the County's efforts to update the Conservation Element, and to that end the consulting team will coordinate with the County Planning Department.

4.4.3. Countywide Master Water Plan An update to the Countywide Master Water Plan is in process, and anticipated to be completed in 2010. This update will include current and future water use projections County-wide. County Public Works Department staff will be responsible for completing the Countywide Master Water Plan update. The work completed for this task will support the preparation of the Countywide Master Water Plan update for the portion of the County within the Basin, and to that end the consulting team will coordinate with the County Public Works Department.

4.5. Prepare 2009 Annual Groundwater Report. This task involves both the development of the framework for an annual groundwater level report, and preparation of the 2009



Annual Report. The consulting team will lead this task. The consulting team will deliver a Sampling and Analysis Plan and the 2009 Annual Groundwater Report, which will set forth the results of the 2009 monitoring activities. This task will also include a data management system. Additionally, the consulting team will conduct an independent technical review of this task, further described in 4.7. below. As the lead in this task, the consulting team is charged with the following responsibilities:

- 4.5.1. Prepare a Sampling and Analysis Plan that includes monitoring protocols for the Basin.
  - 4.5.2. Develop a data management system to store, manage, analyze, and present monitoring data.
  - 4.5.3. Review available data to identify indicator wells for each subarea wells that represent the overall trends for use in development of provisional BMOs.
  - 4.5.4. Monitor groundwater levels in the indicator wells in the spring and fall of 2009.
  - 4.5.5. Prepare groundwater level maps for spring and fall 2009.
  - 4.5.6. Collect groundwater samples from selected wells from each subarea for water quality analysis during the spring monitoring.
  - 4.5.7. Summarize groundwater quality data.
  - 4.5.8. Develop the format for future annual groundwater reports.
  - 4.5.9. Prepare a report of the 2009 groundwater conditions of the Basin.
- 4.6. Prepare Groundwater Management Plan. This task involves completing the GWMP, which will address all the groundwater management components identified in the California Water Code associated with an AB 3030 and SB 1938 groundwater management plan. The consulting team will lead this task, which involves the completion of a draft and final version of the GWMP. This task also includes the preparation of a plan to implement the GWMP, which will be led by the consulting team. The project participants and stakeholders are charged with developing the implementation strategy, which must address the subjects listed in the grant application. The consulting team will also conduct an independent technical review of this task, further described in 4.7.
- 4.7. Technical Review – QA/QC. (1) The consulting team will lead this task, which includes an independent technical review by the members of the consulting team experienced in groundwater management, but not directly involved in the development of the GWMP. (2) City and District will provide QA/QC through independent review of all project submittals.



- 4.8. Project Administration and Management. This task entails implementing a project management program to maintain effective and timely progress including coordination among project participants, the consulting team, and the DWR.
5. Project Performance. The City will continually monitor the project performance to ensure the successful completion of both the individual activities and the overall project.
- 5.1. Quality Assurance. The City's project manager, in corporation with the District, will be responsible for implementing the quality assurance measures and communicating the overall project progress and performance to the stakeholders and the DWR.
- 5.2. Communication with DWR. The overall project performance will be conveyed to the DWR in quarterly progress reports. The City will prepare six quarterly progress reports and one final progress report (completed at the end of the project) during the 18-month project schedule. The District will be copied with all communications between the City and DWR.
6. Information Dissemination.
- 6.1. Monthly Status Reports. During the project, the consultant will provide monthly status reports by e-mail to the City and the District on the progress of work for their use and dissemination to stakeholder groups. As the lead agency, the City will forward these e-mails to the DWR. Information will also be available about the project at the six project meetings with the Committee. The dates and times of the project meetings will be provided to the stakeholders and project participants and also be posted on the websites of the City and the District.
- 6.2. Quarterly Progress Reports. The City will prepare and distribute to the DWR quarterly progress reports in compliance with the Grant Agreement.
- 6.3. Data Associated with Project. The data associated with this project will be provided to the DWR in compliance with Exhibit F (Well Data and Statewide Monitoring Requirements) of the Grant Agreement. This includes meeting the requirements consistent with the Groundwater Quality Monitoring Act of 2001 (Part 2.76, commencing with section 10780 of Division 26 of the California Water Code).
- 6.4. Distribution of Final Plan. Upon completion of the project, the final GWMP will be distributed to basin stakeholders, project participants, and the DWR. A hard copy will be available for review at the City, District, and local libraries. Electronic versions of the GWMP will be available at the City and District websites.
7. Costs. The DWR grant funds will pay for much of the costs of this project. The remainder of the project costs will be borne by the City and the District as allocated below. In adherence to DWR guidelines, the City shall submit to the DWR all invoices for eligible costs incurred during the performance of the project and any other documentation requested by DWR including, but not limited to, timesheets for work performed by City and District staff.



- 7.1. Budget. The total cost of the project is estimated at TWO HUNDRED SEVENTY SEVEN THOUSAND TWO HUNDRED DOLLARS (\$277,200). The DWR grant award totals TWO HUNDRED EIGHT THOUSAND DOLLARS (\$208,000).
- 7.2. Cost-sharing between the City and the District. The City and the District will provide in-kind services totaling the difference between the total cost and the grant award, SIXTY NINE THOUSAND TWO HUNDRED DOLLARS (\$69,200). These costs will be recognized in the form of staff time equal to approximately 330 hours per agency. Each agency is responsible for covering cost overruns if their portion of the scope of work exceeds the above estimated value of the cost share.
- 7.3. DWR Grant Funds. If for any reason DWR ultimately provides less than the grant award total specified in 7.1, the City shall so notify the District once the City learns of the decreased grant amount. After the City receives DWR's payment on the City's final invoice for the project, the City shall notify the District of the amount of eligible project costs unpaid by the DWR. The District will reimburse the City for up to half of the amount of said unpaid eligible project costs so long as said sum does not exceed one half of the difference between the grant award amount in 7.1 and the actual grant funds received by the City from DWR.
- 7.4. Source of Local Funding. The source of local funding, as between the City and the District, is designated by task and will be in the form as described in Section 7.2
- 7.4.1. Support Administrative Requirements. The City shall bear the majority of the costs associated with this task.
- 7.4.2. Conduct Public Outreach and Stakeholder Involvement. The City, the District, and Stakeholders shall share the costs associated with this task. The City and the District agree to share equally in the costs associated with this task, each bearing fifty percent (50%) of the cost.
- 7.4.3. Identify Groundwater Issues and Develop Basin Management Objectives. The District and the County Planning Department shall bear the majority of the costs associated with this task.
- 7.4.4. Document Water Demand and Supply Analysis. The District and the County Planning Department shall bear the majority of the costs associated with this task.
- 7.4.5. Prepare 2009 Annual Report. The District shall bear the majority of the costs associated with this task.
- 7.4.6. Prepare Groundwater Management Plan. The District shall bear the majority of the costs associated with this task.

7.4.7. Technical Review – QA/QC. The City and District shall share equally the costs associated with this task.

7.4.8. Project Administration and Management. The City shall bear the majority costs associated with this task.

8. Documentation of Local Costs Incurred. The City and the District agree to ensure that their respective staff working on the project account for time spent on the project in a manner that would constitute satisfactory documentation for the DWR with respect to each agency's fulfillment of the cost-sharing component outlined in section 7.2. District shall provide all such documentation to City on a quarterly basis and by the 10<sup>th</sup> of the month a quarterly progress report is due to the DWR.
9. Notifications to the DWR. The City must promptly issue to the DWR any notices required by the grant's terms and conditions. With respect to any tasks delegated to the District under this MOU, the District agrees to expeditiously apprise the City of any actions that would demand notification to the DWR.
10. Schedule. The project is expected to have an eighteen (18) month duration. The project is expected to begin in \_\_\_\_\_, 2009 and end in \_\_\_\_\_, 2011.
11. Term. The terms of this MOU shall terminate upon completion of the project and payment by all of the parties of their respective contribution amounts.
12. Further Agreements. The parties shall cooperate and enter into subsequent agreements as necessary to further the intent and purposes of this MOU.
13. Successors and Assigns. The obligations and rights imposed or conferred by this MOU shall be binding on the respective successors and assigns of the parties.
14. Notices. Any notice, consent or other document required or permitted under this MOU shall be in writing and shall be effective on personal delivery or, if mailed, two (2) days after being sent by first-class mail, postage prepaid, addressed as follows:

Attn: Courtney Howard  
Public Works Department  
County Government Center, Room 207  
San Luis Obispo, CA 93408  
choward@co.slo.ca.us

Attn: Christopher Alakel  
Public Works Department  
1000 Spring Street  
Paso Robles, CA 93446  
calakel@prcity.com

15. Governing Law. The laws of the State of California shall govern the interpretation and enforcement of this MOU and its provisions shall be construed in accordance with their fair meaning.



16. Headings. The subject headings have been inserted for convenience only and shall not be used to alter or interpret the content of this MOU.
17. Severability. The invalidity, illegality or unenforceability of any provision(s) contained in this MOU shall not affect or render invalid, illegal or unenforceable the remainder of this MOU, provided that the severance of any such illegal, invalid or unenforceable provision(s) shall not result in a material failure of consideration to any party.
18. Entire Agreement. The terms of this MOU, together with the grant application, contain the entire agreement between the parties as of the date hereof with respect to the financing, completion, and implementation of the GWMP. Any modification or supplement hereto shall be effective only if set forth in writing and signed by all the parties.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date stated under the parties' signatures.

ATTEST:

**ATTEST:**

Julie L. Rodewald, County Clerk-Recorder  
and Ex-Officio Clerk of the Board of Supervisors

By *Sandy Currence*  
Deputy Clerk

SAN LUIS OBISPO COUNTY FLOOD  
CONTROL AND WATER  
CONSERVATION DISTRICT

By BRUCE S. GIBSON  
Chairperson of the Board  
San Luis Obispo County Flood Control and  
Water Conservation District  
State of California

Date December 15, 2009

APPROVED AS TO FORM AND LEGAL  
EFFECT

WARREN R. JENSEN  
County Counsel

By *Warren R. Jensen*  
Deputy County Counsel

Date 11/30/09

CITY OF PASO ROBLES

By *Jim App*  
Jim App, City Manager

Date 12/1/09

## **Exhibit G**

**DEPARTMENT OF WATER RESOURCES**

1416 NINTH STREET, P.O. BOX 942836  
SACRAMENTO, CA 94236-0001  
(916) 653-5791

**RECEIVED**



MAR 02 2012

City of Paso Robles  
Public Works Dept.

February 13, 2012

Christopher Alakel, P.E.  
Water Resources Manager  
City of El Paso de Robles  
1000 Spring Street  
Paso Robles, California 93446

**Local Groundwater Management Assistance, Paso Robles Groundwater Basin  
Management Plan, Agreement No. 4600008331-  
Grant Agreement Completion**

Dear Mr. Alakel:

This letter serves as notification that DWR has reviewed and accepted the Grant Completion Report and contractual obligations for the above referenced grant agreement between the City of El Paso de Robles and DWR has been fulfilled. Therefore, no further reporting for the above referenced grant is required by DWR.

Thank you for your participation in the Local Groundwater Management Assistance funding program.

If you have any questions, please contact Simarjit Dhanota at [sdhanota@water.ca.gov](mailto:sdhanota@water.ca.gov) or (916) 651-9250.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph Yun", with a long horizontal line extending to the right.

Joseph Yun  
Chief, Planning Grant Section  
Financial Assistance Branch  
Division of Integrated Regional Water Management

**City of Paso Robles**  
**Final Project Report (includes work through March 26, 2011)**  
**AB303 Groundwater Local Groundwater Assistance Program –**  
**Paso Robles Regional Groundwater Management Plan**

Grantee: City of Paso Robles  
Funding Source: AB 303  
Title of Project: Paso Robles Regional Groundwater Management Plan  
DWR Agreement: # 4600008331

**Final Project Report**

Report Period: January 2, 2011 through March 26, 2011

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**Section 1. - Executive Summary**

The City of Paso Robles (City) is the recipient of an AB 303 Local Groundwater Assistance Program Grant to prepare the Paso Robles Regional Groundwater Management Plan (Paso Robles Groundwater Basin GMP). This is the Final Project Report. During the final reporting period, the City along with San Luis Obispo County Flood Control and Water Conservation District (District) worked with its consultant to:

- Produce a draft and final 2009 Annual Groundwater Report
- Complete work on the data management system to extract and present selected data from the existing County groundwater level database.
- Produce a user's manual detailing the use of the data management system produced for San Luis Obispo County staff use.
- Complete the final Groundwater Management Plan, the final Groundwater Level Monitoring Plan, and the 2009 Annual Groundwater Report.
- Prepare materials for and hold Groundwater Advisory Committee meeting No. 6 to present the final Groundwater Management Plan and Groundwater Level Monitoring Plan to stakeholders.
- Present the Groundwater Management Plan and Groundwater Level Monitoring Plan to the San Luis Obispo County Groundwater Advisory Committee

The final Paso Robles Groundwater Basin Management Plan was completed by GEI Consultants in March, 2011 (hard copy and electronic files are enclosed with this report). Other project deliverables enclosed with this report submittal include:

- Groundwater Level Monitoring Network Plan for the Paso Robles Groundwater Basin (Hard Copy and electronic files). Note: In the project Scope-of-Work, this plan is referred to as the Sampling and Analysis Plan. Hard copies are found in Appendix E of the Groundwater Basin Management Plan document.
- User Manual for the Groundwater Management Plan Database and Reporting Tool (hard copy and electronic copy)
- Technical Memorandum No. 1 – Groundwater Issues and Basin Management Objectives (hard copies and electronic file)



**City of Paso Robles**  
**Final Project Report (includes work through March 26, 2011)**  
**AB303 Groundwater Local Groundwater Assistance Program –**  
**Paso Robles Regional Groundwater Management Plan**

- Technical Memorandum No. 2 – Water Demands and Supplies (hard copies and electronic files)
- Annual Groundwater Monitoring Report for 2009 (Hard copies found in Appendix F of the Groundwater Management Plan document)

## **Section 2. Report and Project Status**

### **2a) Work Performed During the Reporting Period**

Work during this period focused on completing the Groundwater Management Plan, the Groundwater Level Monitoring Plan, the 2009 Annual Groundwater Report, and preparing presentation materials for the Groundwater Advisory Council Meeting held February 10, 2011. The final plans were presented to project stakeholders at this meeting. The consultant also made a presentation on the plans to the San Luis Obispo County Water Resources Advisory Committee in April, 2011. Copies of the final plans and other project deliverables (including electronic copies) are included with this report.

The SLOC sent GAC meeting invitations to the existing contact list of the North County Water Forum, and posted the invitation to the stakeholder meetings on its web-site (<http://www.slocountywater.org>). The City of Paso Robles also posted the notice locally and on its website. The reimbursement request form included with this Final Project Report includes invoices that have been paid to date by the City of Paso Robles that pertain to the final reporting time frame from January 2, 2011 through March 26, 2011.

With completion of the project, this invoice requests payment of \$26,920.77 for this reporting period and requests reimbursement of funds retained from all project invoices #1 through #5, previously submitted and approved by DWR.

### **2b) Major Accomplishments**

#### **Work completed during this final project period includes:**

##### **Task 1 – Administrative Requirements of Groundwater Management Plan Process**

- Work with County to develop administrative materials for GMP process.

##### **Task 2 – Public Outreach and Stakeholder Involvement**

- Prepare materials for and hold GAC meeting No. 6. to present the final Groundwater Basin Management Plan and Groundwater Level Monitoring Plan.

##### **Task 3 – Identify Groundwater Issues and Develop Basin Management Objectives**

- This task was previously completed.

##### **Task 4 – Document Water Supply and Demand**

**City of Paso Robles**  
**Final Project Report (includes work through March 26, 2011)**  
**AB303 Groundwater Local Groundwater Assistance Program –**  
**Paso Robles Regional Groundwater Management Plan**

- This task was previously completed.

**Task 5– Prepare 2009 Annual Groundwater Report**

- Complete draft and final 2009 Annual Groundwater Report
- Complete the database management system used to extract and present selected data from the existing County database and user manual for the data management system.

**Task 6 – Prepare Groundwater Management Plan**

- Receive and incorporate comments to the draft Groundwater Management Plan. Complete and submit final Groundwater Management Plan.
- Receive and incorporate public comments to the preliminary draft of the Water Level Monitoring plan and complete final Water Level Monitoring plan for presentation at GAC meeting No. 5.

**Task 7 – Technical Review QA/QC**

- Review and address comments by City and County staff and other stakeholders on the draft GMP and Water Level Monitoring plans.

**Task 8 – Project Management**

- Preparation and submittal of invoices to the City.
- Conduct phone calls and conference calls with the project team.

**2c) Project Schedule and Budget**

The project was completed within the time frame specified in the amended project schedule and within the project and grant budget of \$242,400. The only schedule difference of note in completion of tasks was the presentation of the Plan to the County Water Resources Advisory Committee (WRAC), which was moved to the April, 2011 meeting due to scheduling issues with the committee. This task was performed at no charge by the consultant.

**Section 3. Cost Information**

**3a) Costs incurred during the final reporting period**

- The consultant cost information is submitted in Table 1.
- Documentation for in-kind services (local agency share) is provided as Exhibit A.

**City of Paso Robles**  
**Final Project Report (includes work through March 26, 2011)**  
**AB303 Groundwater Local Groundwater Assistance Program –**  
**Paso Robles Regional Groundwater Management Plan**

<p style="text-align: center;">Table 1  Paso Robles Groundwater Basin Management Plan  Consultant Expenditures to Date (through March 26, 2011)</p>									
Task Number/Name	Project Budget	Ending Jan. 29, 2011 Invoice # 707854	Ending Feb. 26, 2011 Invoice # 708032	Ending Mar 26, 2011 Invoice # 708046	Total Expenditure this Period	Total Previous Expenditures	Total Expenditure to Date	Remaining Budget As of Mar. 26, 2011	% Complete As of Mar. 26, 2011
Task 1 - Administrative Requirements of Groundwater Management Plan Process	\$5,400	\$582.01	\$ 401.00	\$ 192.82	\$1,175.83	\$ 4,793.40	\$5,969.23	\$ (569.23)	110.5%
Task 2 - Public Outreach and Stakeholder Involvement	\$53,420	\$1,308.64	\$ 5,135.61	\$ 1,928.15	\$8,372.40	\$ 41,705.88	\$50,078.28	\$ 3,341.72	93.7%
Task 3 - Identify Groundwater Issues and Develop Basin Management Objectives	\$37,360	\$0.00	\$ -	\$ -	\$0.00	\$ 37,073.13	\$37,073.13	\$ 286.87	99.2%
Task 4 - Document Water Demand and Supply Analysis	\$13,750	\$0.00	\$ -	\$ -	\$0.00	\$ 13,734.00	\$13,734.00	\$ 16.00	99.9%
Task 5 - Prepare 2009 Annual Groundwater Report	\$62,240	\$5,082.35	\$ 3,703.50	\$ 390.00	\$9,175.85	\$ 54,467.13	\$63,642.98	\$ (1,402.98)	102.3%
Task 6 - Prepare Groundwater Management Plan	\$45,720	\$3,024.00	\$ 2,360.00	\$ 253.50	\$5,637.50	\$ 41,386.44	\$47,023.94	\$ (1,303.94)	102.9%
Task 7 - Technical Review-QA/QC	\$9,040	\$846.00	\$ 1,323.00	\$ -	\$2,169.00	\$ 7,752.00	\$9,921.00	\$ (881.00)	109.7%
Task 8 - Project Management	\$15,510	\$194.66	\$ 195.53	\$ -	\$390.19	\$ 14,280.37	\$14,670.56	\$ 839.44	94.6%
<b>Total</b>	<b>\$242,440</b>	<b>\$11,037.66</b>	<b>\$13,118.64</b>	<b>\$2,764.47</b>	<b>\$26,920.77</b>	<b>\$ 215,156.76</b>	<b>\$242,077.53</b>	<b>\$ 362.47</b>	<b>99.9%</b>

### 3b) Discussion of Actual Project Budget Compared to Grant Project Budget

The total consultant expenditures submitted in Table 1 through the final reporting period are \$242,077.53 and are slightly under the grant total of \$242,440.00. The total expenditures billed to CDWR is \$362.47 less than the total grant amount because certain expenses billed to the City of Paso Robles by the consultant were not eligible for reimbursement under the grant agreement. Task by Task expenditures tracked closely with those estimated in the original project budget and minor variances. The level of effort exceeded that budgeted for Tasks 1,5,6, and 7, while Tasks 2, 3, 4, and 8 were completed under the budgeted amount. These variances are within acceptable ranges for a project of this magnitude, complexity, and duration.

### Section 4 – Description and Analysis of Project Results and Benefits Attained

The project resulted in the successful completion of a regional groundwater management plan that is accepted by basin stakeholders. Stakeholders from all water use sectors (agricultural interests, rural residential residents, municipalities, and water provider) provided important input to plan development. Completion of the Paso Robles Groundwater Basin Management Plan has achieved the following results and benefits for improved Basin management and provides a guide for future water resource management efforts by stakeholders:

The Groundwater Management has achieved the following benefits:

- Completed a land and water use inventory and analysis within the Basin to evaluate current and future reliability of the water supply. This land and water use analysis provided input to the County's Resource Capacity Study update and Conservation Element Update of the County General Plan.
- Alerted stakeholders to the state of the basin and opportunities to keep the basin in balance and to avoid heading into the projected state of overdraft.
- Compiled and updated available groundwater level data and produced new mapping of recent groundwater level declines the basin has experienced.

**City of Paso Robles**  
**Final Project Report (includes work through March 26, 2011)**  
**AB303 Groundwater Local Groundwater Assistance Program –**  
**Paso Robles Regional Groundwater Management Plan**

- Selected “BMO” wells for each sub-area for use in evaluating groundwater level trends and progress in basin management efforts for future annual reports.
- Identified a comprehensive list of basin management projects and actions that can be implemented by basin stakeholders to improve management of the basin.
- Developed a Basin Monitoring Plan to improve water level and water quality data collection and analysis. This plan identifies current data gaps.
- Developed a database tool for water level analysis and mapping for use by San Luis Obispo County staff in on-going Groundwater Management Plan implementation efforts.
- Established a public participation/involvement process to develop the plan. This process and committee structure will be used to implement the Groundwater Management Plan. This process includes the establishment of a groundwater management plan Steering Committee and a Groundwater Advisory Committee.
- Established a regional approach to groundwater management that is accepted by individual stakeholders in the basin, and state, and local entities that can be used to pursue grant funding to implement projects that support improved groundwater management.

**City of Paso Robles**  
**Final Project Report (includes work through March 26, 2011)**  
**AB303 Groundwater Local Groundwater Assistance Program –**  
**Paso Robles Regional Groundwater Management Plan**

**Exhibit A**

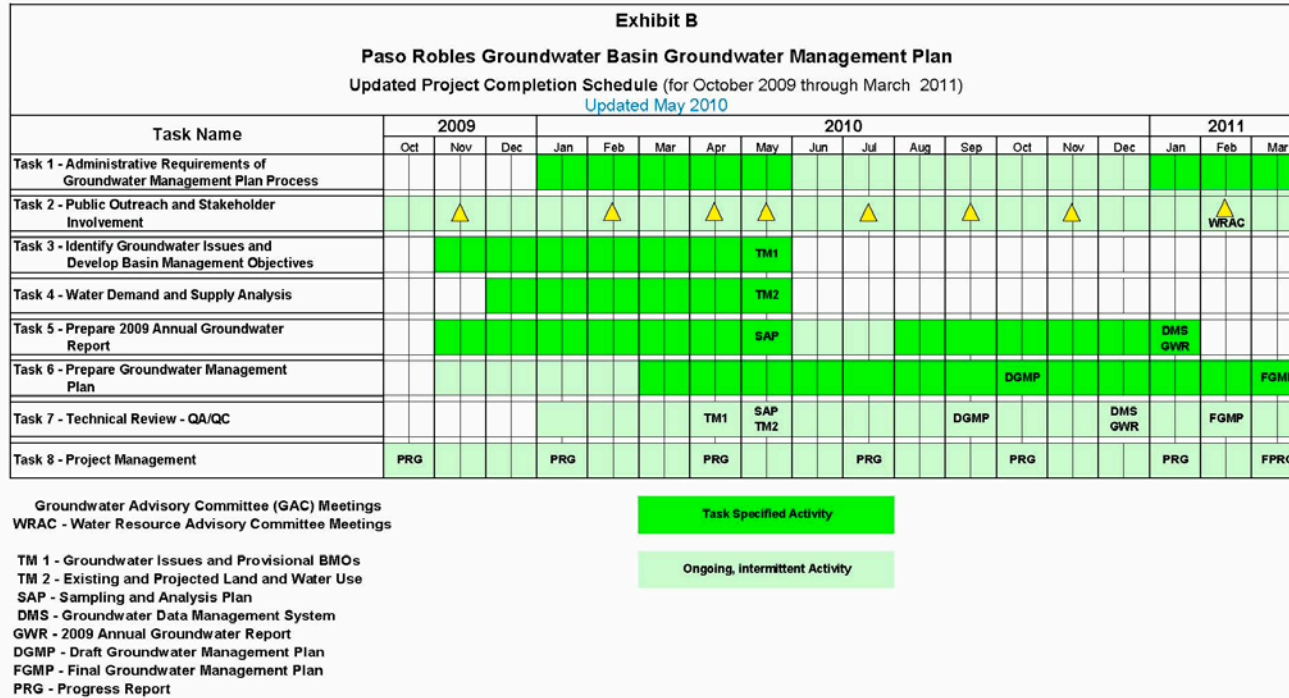
Budget Summary  
In-Kind Services Costs thru 3/26/11  
Paso Robles Regional Groundwater Management Plan

Task	Description	Total Cost Share Original Agreement	City of Paso Robles Staffing Hours Thru Mar 2011	City of Paso Robles Staffing Costs Thru Mar 2011	SLO Flood Control District Staff Hours thru Mar 2011	SLO Flood Control District Staff Costs thru Mar 2011	Cost Share Remaining	Agency Respons.
1	Support Administrative Requirements	\$2,600.00	23.6	\$2,600.00	0.0	\$0.00	\$0.00	City of Paso
2	Conduct Public Outreach and Stakeholder Involvement	\$28,800.00	130.9	\$14,400.00	130.9	\$14,400.00	\$0.00	PR/District
3	Identify Groundwater Issues and Develop Basin Management Objectives	\$4,800.00	0.0	\$0.00	43.6	\$4,800.00	\$0.00	District
4	Document Water Demand and Supply Analysis	\$10,000.00	0.0	\$0.00	90.9	\$10,000.00	\$0.00	District
5	Prepare 2009 Annual Report	\$3,200.00	0.0	\$0.00	29.1	\$3,200.00	\$0.00	District
6	Prepare Groundwater Management Plan	\$2,400.00	0.0	\$0.00	21.8	\$2,400.00	\$0.00	District
7	Technical Review-QA/QC	\$4,800.00	0.0	\$0.00	43.6	\$4,800.00	\$0.00	District
8	Project Administration and Management	\$12,600.00	114.5	\$12,600.00	0.0	\$0.00	\$0.00	City of Paso
	<b>Total</b>	<b>\$69,200.00</b>	<b>269</b>	<b>\$29,600.00</b>	<b>360</b>	<b>\$39,600.00</b>	<b>\$0.00</b>	



**City of Paso Robles**  
**Final Project Report (includes work through March 26, 2011)**  
**AB303 Groundwater Local Groundwater Assistance Program –**  
**Paso Robles Regional Groundwater Management Plan**

**Exhibit B - Project Schedule Plan**



Final Paso Basin Proposal budget&schedule (Oct 2009).xls  
Updated Schedule May 2010  
5/10/2010

**City of Paso Robles  
Final Project Report (includes work through March 26, 2011)  
AB303 Groundwater Local Groundwater Assistance Program –  
Paso Robles Regional Groundwater Management Plan**

**Exhibit C**

**Final Project Deliverables  
(Includes Original, 2 Hard Copies, and CD with Word and pdf files)**

- 1. Paso Robles Groundwater Basin Management Plan**
- 2. Groundwater Level Monitoring Network Plan for the Paso Robles Groundwater Basin (Hard Copies in Appendix E of the Groundwater Basin Management Plan)**
- 3. 2009 Annual Groundwater Report (Hard copies in Appendix F of the Groundwater Management Plan)**
- 4. Groundwater Database Users Manual and CD of database**

## **Exhibit H**

# **BEFORE THE BOARD OF SUPERVISORS**

*of the*

## **SAN LUIS OBISPO COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT**

Tuesday, March 27, 2012

**PRESENT:** Supervisors Frank Mecham, Bruce S. Gibson, Adam Hill, Paul A. Teixeira and  
Chairperson James R. Patterson

**ABSENT:** None

### **RESOLUTION NO. 2012-73**

#### **A RESOLUTION OF THE SAN LUIS OBISPO COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT, CALIFORNIA, ADOPTING A GROUNDWATER MANAGEMENT PLAN FOR THE PASO ROBLES GROUNDWATER BASIN**

The following Resolution is hereby offered and read:

**WHEREAS**, Water Code section 10750 et seq. provide local public agencies increased management authority over their groundwater resources and encourage local public agencies to adopt groundwater management plans in order to increase their eligibility for grant funds for groundwater related projects; and

**WHEREAS**, the Legislature has also declared that the additional study of groundwater resources is necessary to better understand how to manage groundwater effectively to ensure the safe production, quality, and proper storage of groundwater in the State; and

**WHEREAS**, the adoption of a groundwater management plan is encouraged, but not required, by law; and

**WHEREAS**, prior to adopting a resolution of intention to draft a groundwater management plan, Water Code section 10753.2 requires a local agency to hold a hearing, after publication of notice pursuant to Government Code Section 6066, on whether or not to adopt a resolution on intention to draft a groundwater management plan; and

**WHEREAS**, pursuant to Government Code Section 6066, the County duly published notice of a public hearing before the District's Board of Supervisors on whether or not to adopt a resolution of intention to draft a groundwater management plan (GMP) for the Paso Robles Groundwater Basin (Basin); and

**WHEREAS**, the Board of Supervisors conducted such public hearing on March 22, 2011, at the San Luis Obispo County Flood Control & Conservation District's Board Room, 1050 Monterey Avenue, San Luis Obispo, California and subsequently adopted a resolution of intention to draft a GMP for the Basin; and



**WHEREAS**, the District, in coordination with Basin stakeholders, has drafted a GMP for the Basin that contains components in accordance with California Water Code; and

**WHEREAS**, prior to adopting a resolution to adopt the GMP for the Basin, Water Code section 10753.5 requires a local agency to hold a hearing, after publication of notice pursuant to Government Code Section 6066, on whether or not to adopt a GMP; and

**WHEREAS**, pursuant to Government Code Section 6066, the County duly published notice of a public hearing before the District's Board of Supervisors on whether or not to adopt a resolution adopting the GMP for the Basin;

**WHEREAS**, the Board of Supervisors conducted such public hearing on March 27, 2012, at the San Luis Obispo County Flood Control & Conservation District's Board Room, 1050 Monterey Avenue, San Luis Obispo, California;

**WHEREAS**, the District intends to appoint a Blue Ribbon Committee to advise on implementation of the GMP and intends the Blue Ribbon Committee will: 1) recommend actions to stabilize the basin; 2) recommend structures for management and accountability of GMP activities and 3) recommend financing and cost sharing approaches for implementation activities;" and

**WHEREAS**, no property owner submitted written protests to adoption of the Paso Robles Groundwater Basin Management Plan.

**NOW, THEREFORE, BE IT RESOLVED AND ORDERED** by the Flood Control and Water Conservation District of the County of San Luis Obispo, State of California, as follows:

Section 1: To adopt this resolution adopting the groundwater management plan for the Paso Robles Groundwater Basin (Basin) in accordance with the provision of Water Code sections 10750 et seq., for the area of the Basin within the District's boundary and not served by a local agency, a water corporation regulated by the Public Utilities Commission, or mutual water company pursuant to Water Code Sections 10750.7, 10750.8 and 10753(b) and visually depicted in Attachment "A".

Section 2: A Blue Ribbon Committee is formed, consisting of individuals and their alternates, if any, as listed in Attachment "B" of this resolution and dissolving in two years from the date of this resolution, to identify and evaluate opportunities for stabilizing groundwater levels in the Basin, develop a recommendation for the governance/management structure for implementing/maintaining the GMP over time and identify funding mechanisms for each.

Section 3: The Public Works Director is directed to publish a copy of this Resolution and submit it to the California Department of Water Resources as required by law.

Section 4: The Public Works Director shall report back to the Board with recommendations for implementation activities.

#####



Upon motion of Supervisor, seconded by Supervisor, and on the following roll call vote, to

wit:

AYES: Supervisors Mecham, Gibson, Hill, Teixeira and Chairperson Patterson

NOES: None

ABSENT: None

ABSTAINING: None

the foregoing resolution is hereby adopted.

James R. Patterson

Chairperson of the Board of Supervisors

ATTEST:

JULIE L. RODEWALD

Clerk of the Board of Supervisors

By: Annette Ramirez

Deputy Clerk

(SEAL)

APPROVED AS TO FORM AND LEGAL EFFECT:

WARREN R. JENSEN

County Counsel

By: /s/ Patrick J. Foran

Deputy County Counsel

Dated: March 12, 2012

L:\UTILITY\JAN11\BOS\Paso Grndwtr Basin Reso of Intent(2).doc

STATE OF CALIFORNIA,           )  
  )  
County of San Luis Obispo       )       ss.

I, JULIE L. RODEWALD, County Clerk  
and ex-officio Clerk of the Board of Supervisors, in and for the County of San Luis Obispo,  
State of California, do hereby certify the foregoing to be a full, true and correct copy of an order  
made by the Board of Supervisors, as the same appears spread upon their minute book.

WITNESS my hand and the seal of said Board of Supervisors, affixed this 3<sup>rd</sup> day of  
April, 2012.

JULIE L. RODEWALD

County Clerk and Ex-Officio Clerk of the  
Board of Supervisors

(SEAL)

By:   
Deputy Clerk



**Area of Adoption  
Paso Robles  
Groundwater Basin  
Management Plan**

**Legend**



Paso Robles Groundwater Basin

Portion of Basin for which  
District is Adopting the GMP  
(excludes Service Areas of  
Local Agencies, Water  
Corporations regulated by  
the Public Utility  
Commission and Mutual  
Water Companies per  
Section 2 of the  
Resolution.



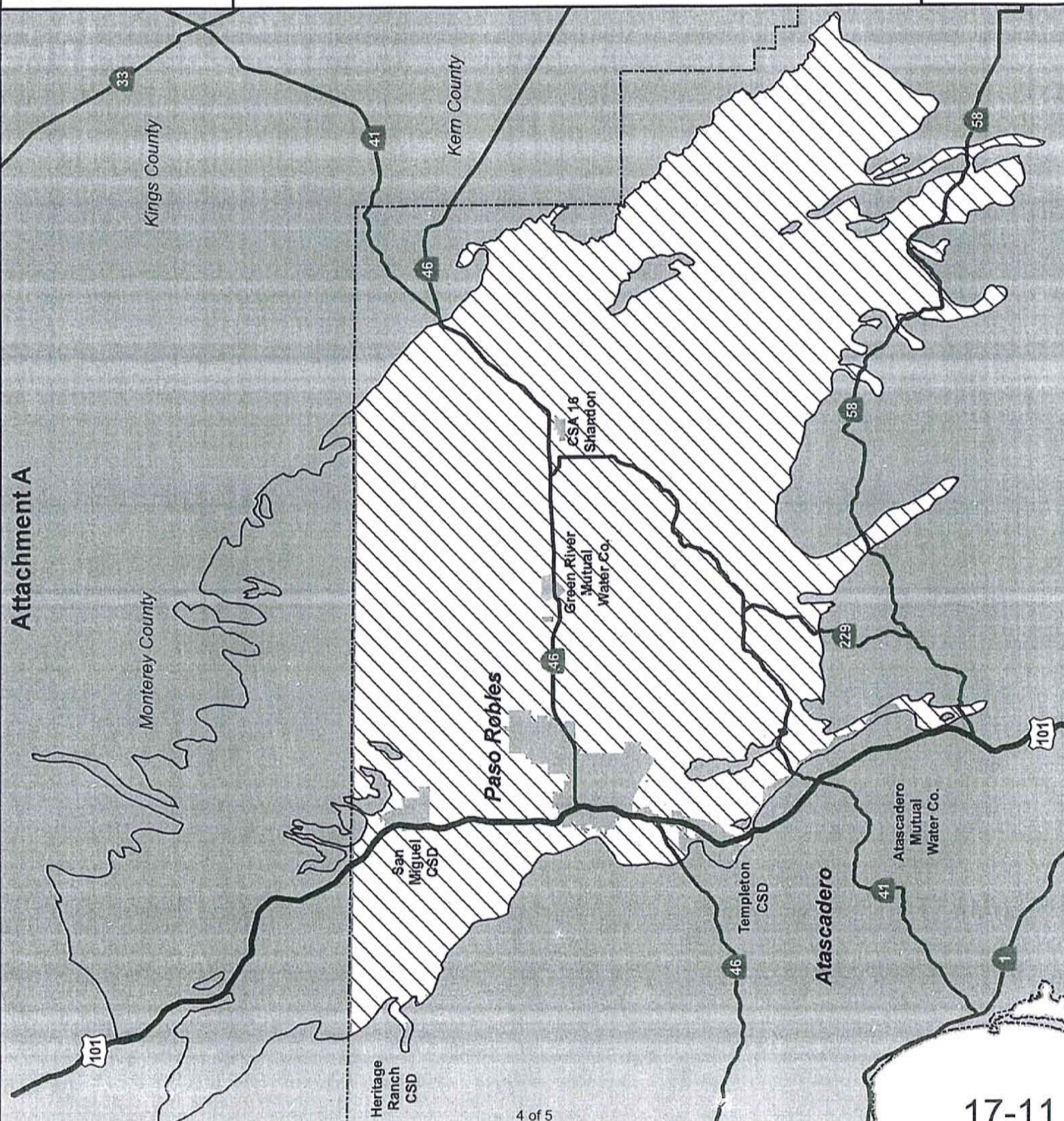
Some of the Larger Service  
Area Exclusions



**PUBLIC WORKS**  
GIS SERVICES



CALIFORNIA COUNTY





**Paso Robles Groundwater Basin Management Plan  
Blue Ribbon Steering Committee**

Agency or Group	Position	Name
Atascadero Mutual Water Company	Member	John Neil
	Alternate Member	Jaime Hendrickson
Central Coast Vineyard Team	Member	Kris Beal
	Alternate Member	Willy Cunha
City of Atascadero	Member	Russ Thompson
	Alternate Member	David Athey
City of Paso Robles	Member	Christopher Alakel
	Alternate Member	Keith Larson
Flood Control and Water Conservation District	Member	Courtney Howard
	Alternate Member	Dean Benedix
Monterey County Water Resources Agency	Member	Robert Johnson
	Alternate Member	Kathleen Thomasberg
Paso Robles Imperiled Overlying Rights (PRIOR)	Member	Steve Sinton
	Alternate Member	Kent Gilmore
Paso Robles Wine Country Alliance	Member	Lisa Bodrogi
	Alternate Member	Jerry Reaugh
San Luis Obispo Cattlemen's Association	Member	Kurt Bollinger
	Alternate Member	Ray Allen
San Luis Obispo County Farm Bureau	Member	Joy Fitzhugh
	Alternate Member	Jackie Crabb
San Miguel Community Services District	Member	Rene Salas
	Alternate Member	TBD by San Miguel CSD
Templeton Community Services District	Member	Jeff Hodge
	Alternate Member	Jay Short
Upper Salinas-Las Tablas Resource Conservation District	Member	Laura Edwards
	Alternate Member	John DeRosier
At-Large	Member	Larry Werner
	Alternate Member	Mike Cussen
At-Large	Member	Sue Luft
	Alternate Member	Jim Magill
At-Large	Member	Dana Merrill
	Alternate Member	Don Brady
At-Large	Member	Claudia Salot-Engel
	Alternate Member	Maria Lorca

#17 3/27/12  
Amended Page 12

## **Exhibit I**



**CITY OF EL PASO DE ROBLES**

*"The Pass of the Oaks"*

# **Request for Proposal**

## **Paso Robles Groundwater Basin Management Plan**

Issue Date:  
September 30, 2008

**Submission Date:**  
**October 24, 2008 by 3:00 p.m.**

City of El Paso de Robles  
1000 Spring Street  
Paso Robles, CA 93446  
[www.prcity.com](http://www.prcity.com)

Contact: Christopher Alakel, P.E.  
City of Paso Robles  
Water Resources Manager  
(805) 227-7200 ext. 7715  
[CAlakel@prcity.com](mailto:CAlakel@prcity.com)



## Introduction

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The Paso Robles Groundwater Basin supplies water for 29 percent of San Luis Obispo County's population and an estimated 40 percent of the agricultural production of the County. Currently, the cities of Paso Robles and Atascadero, and the communities of Templeton, Shandon, Creston, San Miguel, and Whitley Gardens rely on groundwater. In addition, individual domestic groundwater users and isolated subdivisions are located throughout the Basin. Agricultural water users represent about 70 percent of the pumpage in the Basin and are concentrated on the alluvial valleys of the streams and rivers and along the Highway 46 corridor.

Recognizing the importance of this critical resource, the San Luis Obispo County (County) and the City of Paso Robles (City) have worked with other stakeholders in the Basin toward improved management of groundwater resources. Relevant planning documents, agreements, and technical investigations include the following:

- San Luis Obispo County Master Water Plan (EDAW, August 1998)
- Paso Robles Groundwater Basin Study (Phase I) (Fugro, August 2002)
- Paso Robles Groundwater Monitoring Program Evaluation (Cleath & Associates, October 30, 2003)
- Paso Robles Groundwater Basin Study Phase II – Numerical Model Development, Calibration, and Application (Fugro, February 2005)
- Paso Robles Groundwater Basin Agreement (2005)
- San Luis Obispo County Integrated Regional Water Management Plan (San Luis Obispo County, Updated July 2007)
- Water Resources Plan Integration and Capital Improvement Program (T.J. Cross, February 2007)
- Annual Report on the Paso Robles Groundwater Basin (Todd Engineers, December 2007)
- Paso Robles Groundwater Basin Water Banking Feasibility Study (San Luis Obispo County, 2007)
- City of Paso Robles AB303 Grant Application 2007-2008 (December 2007)
- City of Paso Robles Urban Water Management Plan (Todd Engineers, June 2008)

These documents are available on the County or City's websites and/or upon request.

In 2007, the City, in cooperation with the County, applied for and secured a Local Groundwater Assistance Act Grant from DWR to prepare a groundwater management plan (Plan) in accordance with Water Code Sections 10750-10756, also known as Assembly Bill (AB) 3030 and Senate Bill (SB) 1938. The City was awarded partial funding.

Reasons to develop a Plan include the following:

- The Basin is the sole source of water supply for a major portion of the San Luis Obispo County and the southern portion of Monterey County and is critical to the region's healthy agribusiness.
- There is considerable concern about potential overdraft conditions throughout the Basin. This led to the preparation and adoption of the Paso Robles Basin Agreement (Agreement) in 2005, which includes some of the municipal and agricultural lands, but also recognizes that there is not a formal groundwater management plan in place (Paso Robles Basin Agreement, 2005.)
- While the Basin in total is not considered to be in a state of overdraft, the Estrella Subarea is experiencing groundwater level declines and has been identified by the County Resource Management System at a Level of Severity I.
- Pumpage throughout the Basin is projected to reach sustainable yield within the foreseeable future, as evidenced by sharp localized groundwater level declines in some areas.
- The current groundwater monitoring program in the subbasin needs to be updated to support the long-term collection, management, analysis, and presentation of data to stakeholders to improve the understanding of the groundwater setting in the Basin and to support groundwater management activities.
- Existing studies such as the City of Paso Robles' *Water Resources Plan Integration and Capital Improvement Program* (T.J. Cross, 2007) and the County's *Water Banking Feasibility Study* (SLO County, 2008) have identified the need for additional groundwater management opportunities and projects, such as conjunctive use projects, to improve water supply reliability.
- The Plan will foster basin-wide cooperation, increase local ability to secure grants to fund the planning and implementation of groundwater management projects, and enhance independent management.
- Increasing levels of total dissolved solids point to a trend in return flow management that must be reversed to preserve water quality.
- This is a basin where the long-term yield can be sustained through well-planned management by the local community.

The goal of the Plan is to (1) provide the framework for improved groundwater management, (2) maintain groundwater levels, and (3) protect groundwater quality to ensure the long-term groundwater supply reliability in the Basin.

The Plan is intended to build on prior efforts to address groundwater management issues in the Basin and identify and introduce projects addressing these issues. Consistent with the other projects that have been recently completed in the Basin, the development of the Plan will utilize an extensive public outreach and stakeholder involvement process to invite and encourage participation by urban and agricultural water users as well as by stakeholders and interested parties. This approach will facilitate the cooperative development of the Plan to ensure that all parties are comfortable with the Plan and to satisfy the requirements of AB 3030 and SB 1938.

One key component in the Plan is the development of Basin Management Objectives (BMOs) to establish local targets for groundwater levels, groundwater quality, and land subsidence. The BMOs will be tracked by monitoring groundwater levels and quality in the Basin to determine the type and magnitude of the local groundwater issue and identify potential projects and management activities to address these issues. In addition, the monitoring will be used to monitor the impacts of management activities.

The BMOs will be developed in coordination with existing efforts such as the County's Resource Capacity Study and update of the Conservation and Open Space Element (COSE) of the General Plan, and in light of key projects. Other related projects include the Nacimiento Water Project (currently under construction), which will deliver surface water to local municipal users (likely to offset some local groundwater pumping) and water banking opportunities using the County's 20,000 acre-feet per year of unused State Water Project (SWP) Table A supply (currently under investigation).

## Proposed Groundwater Management Plan

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The proposed Plan will focus on the Basin in northern San Luis Obispo County and southern Monterey County by including the urban, agricultural, and industrial water users in the Basin; water management agencies such as the County, the City, communities of Templeton, Atascadero, Creston, Whitley Gardens and Shandon (County Service Area No. 16); the WRAC; North County Water Forum; Monterey County and the general public. The Basin boundary was identified by DWR in Bulletin 118 and modified in the Paso Robles Groundwater Basin Study in 2002.

### Plan Purpose and Goals

#### **Purpose**

The purposes of this project include:

- Build upon the existing organization of local water purveyors, agricultural interests, and stakeholders to increase understanding of local groundwater resources and groundwater management opportunities.
- Identify projects and programs that can be implemented to improve long-term water supply reliability in the Basin.
- Establish a regional approach to groundwater management that is accepted in the Basin and recognized by other local, State, and federal agencies and that can be used successfully to pursue grant funding to implement projects that support improved groundwater management.

#### **Goals**

The project goals include:

- Alert stakeholders to the state of the Basin and the opportunity to keep this Basin in balance and avoid heading into the projected state of overdraft.

- Approach the development of the Plan and BMOs in a manner that improves the likelihood of multi-agency adoption.
- Expand the existing groundwater monitoring program and annual reporting format for the Plan Area.
- Complete a land and water use analysis within the Basin for existing and expected future conditions to evaluate the impacts of land use (and the associated water use) on long-term water supply reliability in the Basin.
- Incorporate the results of the land and water use analysis for the Basin into the Countywide planning efforts scheduled for 2008-2009, including the ongoing County Resource Capacity Study and Conservation Element Update of the General Plan which are led by the Planning Department, and Countywide Master Water Plan, which will be led by the Public Works Department.

## Scope of Work

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The Scope of Work is divided into the following eight major tasks:

Task 1 – Administrative Requirements of Groundwater Management Plan Process

Task 2 – Public Outreach and Stakeholder Involvement

Task 3 – Identify Groundwater Issues and Develop Basin Management Objectives

Task 4 – Water Demand and Supply Analysis

Task 5 – Prepare 2009 Annual Groundwater Report

Task 6 – Prepare Groundwater Management Plan

Task 7 – Technical Review – QA/QC

Task 8 – Project Management

### **Task 1 – Administrative Requirements of Groundwater Management Plan Process**

The purpose of this task is to provide support to satisfy the administrative requirements for completing an SB 1938-compliant Plan. These administrative requirements occur primarily at the beginning and end of the preparation of the Plan. The consultant will assist the project participants (City, County, and other agencies that state intent to adopt plan) in:

- Establishing a public participation/public involvement process including:
  - Inviting and encouraging public participation in the development of the Plan.
  - Forming the Paso Robles Basin Groundwater Advisory Committee (Paso Robles Basin GAC) of interested parties and stakeholders. The North County Water Forum will be used as the starting point for the formation of the Paso Robles Basin GAC.
  - Reviewing notices prior to publication of City Council and other meetings in local newspapers regarding development of the Plan; notice of intent to develop the Plan; notice of the availability of the draft Plan; and notice of the availability of the final Plan to be circulated for agency adoption.

- Assisting the project participants in complying with the public involvement requirement in SB 1938.
- Assisting the project participants with other administrative procedures.

## **Task 2 – Public Outreach and Stakeholder Involvement**

This task includes activities associated with the public outreach and stakeholder involvement process, such as communication with Basin stakeholders and other interested parties. There is an established and very active stakeholder process in northern San Luis Obispo County. This process has been used extensively to address issues and build consensus among a very diverse group of stakeholders.

The consultant will support the City and County with this task. This task involves 14 meetings:

- Ten regularly scheduled workshops for the Paso Robles Basin GAC to guide development of the Plan, review of project deliverables, and receipt of comments on the plan development and interim deliverables.
- Three briefings to the WRAC at selected times in the project schedule to provide meaningful updates to the WRAC.
- Paso Robles City Council and possibly County Board of Supervisors briefings.
- Up to four additional briefings will be provided to the local advisory bodies during the preparation of the Plan to keep the local stakeholders and interested parties informed of the progress of the Plan and to elicit feedback.

Additional efforts under this task may include:

- Circulation of newsletters in advance of the meetings as part of public outreach and stakeholder involvement.
- Providing visual aids, copies of presentations and deliverables, and refreshments at meetings.
- Providing meeting agenda and minutes as well as other announcements regarding the Plan on the City's and County's websites and distributing this information at the meetings.
- Coordinating with local and federal agencies.

## **Task 3 – Identify Groundwater Issues and Develop Basin Management Objectives**

The purpose of this task is to identify the groundwater management issues within the Plan Area and develop BMOs that identify the groundwater management activities that are linked to each BMO. The BMOs will include objectives for water levels, water quality, and land subsidence. The activities associated with the development of BMOs will address the groundwater management components and may be organized into the following groups.



- Groundwater protection issues may include:
  - Control of saline water
  - Identification of well protection and recharge areas
  - Regulation of the migration of contaminated groundwater
  - Administration of a well abandonment and well destruction program
  - Identification of well construction policies
  - Coordination with agencies responsible for groundwater contamination cleanup, recharge, storage, recycling, and extraction projects
  - Review of land use plans and coordination with planning agencies to assess activities that create a reasonable risk for groundwater contamination
- Groundwater use/recharge issues may include:
  - Prevention and mitigation of conditions of overdraft
  - Replenishment of groundwater extracted by water producers
  - Monitoring of groundwater quality and storage levels
  - Facilitating conjunctive use operations

The groundwater subareas listed below were identified in the Basin Study (Fugro, 2002) based on water quality, source of recharge, groundwater movement, and contours on the base of permeable sediments. The Annual Report (Todd Engineers, 2007) used these same subbasin/subarea delineations. It is expected that the BMOs will be developed based upon the groundwater subarea delineations from the Basin Study:

- North Gabilan Subarea
- Bradley Subarea
- South Gabilan Subarea
- Estrella Subarea
- Creston Subarea
- Shandon Subarea
- Atascadero Subbasin

This task will be led by the consulting team. Independent technical review of this task will be completed by the consulting team as described in Task 7. The deliverable for this task will be a technical memorandum documenting the groundwater issues and provisional BMOs for each subarea.

#### **Task 4 – Water Demand and Supply Analysis**

The purpose of this task is to document the current and future land use and the associated water uses in the Basin based on readily available information. There are three land use and water use planning activities in the County that are coincident with the proposed schedule for the development of the Plan whose scope includes analyzing the water demand and water supply in the Basin.

- **Resource Capacity Study** - In its June 5, 2007, meeting, the Board recommended a Level of Severity I designation for the Basin, indicating a low immediacy of resource deficiency. This designation was made with reference to the 1980-1997 groundwater level decreases in the Estrella subarea and to increases in the extent of overlying land uses, including ranchettes, golf courses, and vineyards. As a result of this designation, County staff was directed to prepare a Resource Capacity Study that will focus on the area of groundwater level decrease. A draft Resource Capacity Study is expected to be available in January 2009.
  
- **Conservation Element of the County General Plan** - The Conservation Element of the County's General Plan is being updated to improve, consolidate, and revise the existing policies and programs, including those related to water resources. "Cutting edge" policies will be developed related to green building, watershed protection, water conservation, biological resource protection, and conservation-oriented land use patterns such as smart growth that may have an impact on future groundwater basin management efforts. The Conservation Element of the County General Plan will be completed by the County Planning Department. A draft Conservation Element is anticipated to be available in November 2008.
  
- **Countywide Master Water Plan** - In addition, the Countywide Master Water Plan update is scheduled for 2010. Incorporating recent documents such as urban water management plans, general plan updates, and water/wastewater master plans, the Countywide update will include current and future water use projections for water planning areas. The Groundwater Management Plan development will coincide with the Master Water Plan development and it is anticipated that the consultant and the County Public Works Department will support one another during the process.

The County Department of Planning staff will be responsible for completing the Resource Capacity Study and Conservation Element, and the Public Works staff will be responsible for completing the Countywide Master Water Plan update described above.

The *Update for the Paso Robles Groundwater Basin* (Update) (Todd Engineers, December 2007) provided an overview of the current conditions of the Basin building on the Groundwater Basin studies (Fugro 2002 and 2005). The report provided an update from 1997 through 2006 on rainfall, groundwater levels and storage, and groundwater management. An update of pumping in the Basin will be completed in the next few months. The Update report and pumping update will become part of the Resource Capacity Study. The first Annual Groundwater Report, prepared as part of this Plan, will include monitoring data collected in 2007 through 2009 and discuss changes in land use, water use, pumping, groundwater levels, and groundwater quality.

Independent technical review of this task will be provided by the consulting team as described in Task 7. The deliverable for this task is a technical memorandum documenting the existing and expected future land and water use conditions. In addition, the GIS files used in the analysis will be provided to the City and County Planning Department.

### **Task 5 – Prepare 2009 Annual Groundwater Report**

The purpose of this task is to build upon the existing groundwater monitoring taking place in the Basin and to formalize the groundwater monitoring program. This includes the following activities:

- Prepare a Sampling and Analysis Plan (SAP) that includes monitoring protocols for the Basin.
- Develop a data management system to store, manage, analyze, and present monitoring data.
- Review available data to identify wells for each subarea that represent the overall trends for use in development of provisional BMOs.
- Prepare groundwater level maps for spring and fall 2009.
- Summarize groundwater level and quality data.
- Develop the format for future annual groundwater reports.
- Prepare the 2009 Annual Groundwater Report.

This task will be led by the consulting team. The deliverables for this task include the Sampling and Analysis Plan and the 2009 Annual Groundwater Report, which will present the results of the 2007 through 2009 monitoring activities. In addition, this task will include a data management system. The data management system software will be non-proprietary and the consultant will provide the County and City with all the data files and provide general guidance in operation of the data management system, if needed.

Independent technical review of this task will be provided by the consulting team as described in Task 7. In addition, the draft 2009 Annual Groundwater Report will be presented to the Paso Robles Basin GAC, WRAC, and interested local advisory committees in order to obtain review and comment by the stakeholders and interested parties.

### **Task 6 – Prepare Groundwater Management Plan**

A draft and final version of the Plan will be completed as part of this task. The draft document will be made available to the project participants, stakeholders, and DWR for review and comment. The final document will be prepared, based on information collected on the draft document. The final Plan will be provided to the project participants for adoption. Project costs associated with this task are for the production and distribution of 10 draft and 20 final copies of the Plan.

This task will include the preparation of an implementation plan that will be used to guide groundwater management in the Basin and support other planning efforts such as the IRWMP. The project participants and stakeholders will develop the implementation plan, which will address:

- Continuation of the groundwater monitoring program, including the analysis and reporting of annual groundwater conditions
- Continuation of monitoring groundwater protection efforts
- Ongoing planning for groundwater recharge and conjunctive use opportunities
- Planning to periodically update the Plan as additional information is developed
- Identifying funding for continued groundwater management activities in the subbasin.

This task will be led by the consulting team. Independent technical review of this task will be completed by the consulting team as described in Task 7. In addition, the draft GMP will be presented to the Paso Robles Basin GAC, the WRAC and interested local advisory committees in order to get review and comment by the stakeholders and interested parties.

#### **Task 7 – Technical Review – QA/QC**

This task includes an independent technical review by the members of the consulting team experienced in groundwater management, but not directly involved in the development of this GMP. This internal QA/QC will provide additional review and expertise to the project to ensure that it meets the expectations of the local project participants and stakeholders, provides a vision and framework for the implementation of groundwater management in the Basin, and meets the requirements for SB 1938. The technical review is expected to focus on four specific areas:

- Identification of groundwater issues and development of BMOs (Task 3)
- Documentation of the water demand and supply analysis (Task 4)
- Preparation of the Sampling and Analysis Plan and the 2009 Annual Groundwater Report (Task 5)
- Review of the draft groundwater management plan including the implementation plan (Task 6).

#### **Task 8 – Project Management**

This task includes general project management and coordination during throughout the project. This task includes:

Preparing monthly invoices and progress reports

- The progress report is to conclude a brief narrative of the task that are underway and their progress to date. Also, the consultant shall develop and maintain a project schedule that will be updated regularly and submitted with the monthly progress reports.

## Project Deliverables

The project deliverables identified in the work plan are listed below.

- Participation in six project meetings and up to eight briefings (**Task 2**)
- Technical memorandum documenting BMOs (**Task 3**)
  - Technical memorandum draft and final report – A task outline and approach shall be submitted, reviewed, and approved prior to commencing with a TM Draft and final.
- Interim technical memorandum documenting water use and supply analysis (**Task 4**)
  - Technical memorandum draft and final report – A task outline and approach shall be submitted, reviewed, and approved prior to commencing with a TM Draft and final.
- Sampling and Analysis Plan and Groundwater Report Draft, and Final (**Task 5**)
- 2009 Annual Groundwater Report (**Task 5**)
- Water level and water quality data management system (**Task 5**)
- Draft and final Plan (**Task 6**)
- Monthly progress reports and schedule updates (**Task 8**)

## Schedule

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Consultant Proposal Deadline.....	October 24, 2008 @ 3:00 PM
Consultant Selection.....	November 7, 2008
Notice to Proceed.....	December 8, 2008
Groundwater Advisory Committee Meetings.....	Quarterly beginning December 2009
Presentations to Water Resource Advisory Committee.....	July and December 2009
Identify Issues and Develop Basin Management Objectives (T3).....	March 2009
Water Demand and Supply Analysis (T4).....	July 2009
Sampling and Analysis Plan & Ground Water Report (T5).....	February 2009
Complete Draft Groundwater Management Plan (T6).....	July 2009
Complete Final Groundwater Management Plan (T6).....	December 2009

## Specific Instructions for the Proposal

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**Mailing Instructions:** **Five (5) copies** of the proposals plus an electronic copy should be submitted as specified below:



### **Inquiries**

All questions and requests for clarification should be directed to Christopher Alakel, via email at [calakel@prcity.com](mailto:calakel@prcity.com) . Answers to questions will be posted on the City's website or e-mailed to all parties on the proposal distribution list.

### **Submittal Date**

**Five (5) copies of the Proposals are due no later than 3:00 pm, October 24, 2008.** All proposals received after the deadline will be rejected.

Proposals must be delivered or mailed to:

City of Paso Robles

Attn: Mr. Christopher Alakel, P.E.

Water Resources Manager

1000 Spring Street

Paso Robles CA 93446

### **Proposal Content**

1. *Project Understanding:* A clear statement showing the understanding of the project scope and objectives and an understanding of AB 3030 and SB 1938 plan requirements.
2. *Scope:* Detailed scope of work and methodology that comprehensively define and describe the individual tasks identified in this RFP, which reflect an understanding of the City's requirements. Proposals should contain more just a regurgitation of the scope outlined above. Showing some thought and consideration regarding specific activates and approaches necessary to accomplish the tasks outlined above is highly recommend. Assumptions and desired outcomes should be included as part of the approach to each major task. Project management should also be discussed, including proposed meetings, coordination, and communication with City staff and project participants. The scope of work should also include internal review procedures and QA/QC processes, such as methods to control costs, schedule, project staff, and timely delivery of project deliverables.
3. *Schedule:* Provide a schedule that includes all work tasks. The schedule should identify important milestones, meetings, deliverables, and specified estimated completion durations for tasks. Include assurance of firm's ability to complete all work on time.
4. *Firm Experience and References:* Provide a brief description of recent consultant team's experience on similar groundwater management plans, including the stakeholder involvement process and whether adopted by multiple agencies and accepted by State agencies. Firm must demonstrate experience in leading the development of a complete groundwater management plan, not just portions thereof. Include names and contact information for three recently completed projects.

5. *Project Team:* Descriptions of specific experience (consistent with 4. above) and capabilities of the designated Project Team by name and title. Clearly associate specific staff to work tasks and estimate the percentage of time they will contribute to the project, their responsibilities, and their qualifications. Include an organizational chart. Indicate lines of communication and the location of the office where the work will be performed. Submit resumes for each identified individual in an appendix to the proposal.
6. *Subconsultant Experience and References:* Provide a brief description of recent consultant team's experience on similar groundwater management plans. Clearly associate subconsultant to work tasks and estimate the percentage of time they will contribute to the project, their responsibilities, and their qualifications.
6. *Budget:* Analysis of the estimated hours that each project team member will contribute for the individual tasks presented in the Scope of Work. Include names and estimated costs of all subconsultants, reproduction costs, and other direct costs and expenses. Include an hourly rate schedule for all personnel to bill to this proposal. The budget shall include labor allocation for each major project task as indicated in the Scope of Work.
7. *Signature:* The proposal is to be signed by an authorized corporate officer whose signature is binding upon the firm.
8. *Valid Period:* Include a statement that proposal will remain valid for a minimum of 60 days.
9. *Conflict of Interest:* Proposal shall include a statement that no conflicts of interest exist in the provisions of these services.
10. *Appendix:* Include supplemental information, if any, such as firm's brochure, fees for additional services etc. at the end of the proposal.

## Selection Process

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The City and the County will form a Review Committee that may include representatives from City staff and City consultants, County staff, and/or key stakeholder representatives. The Review Committee evaluation procedure will consist of the following tasks:

1. Upon receipt of the proposals, the Review Committee will evaluate the proposals for completeness.
2. The Review Committee will select proposals that qualify based on the following factors:
  - A. Experience of the consultant and staff proposed in developing groundwater basin management plans.

- B. Record of the firm and project manager in accomplishing the work within the required time.
  - C. Clear understanding of the proposed scope of work.
  - D. Methodology to be employed in conducting the project.
  - E. Record of the firm and project manager in being responsive to the client's requests.
  - F. Estimated fees for the proposed scope of work.
- 3. The Review Committee, at its discretion, may select a reasonable number of firms to participate in an interview process.
  - 4. The Review Committee will rank the consultants and recommend the consultant to be selected for the project.
  - 5. The Contract documents will be prepared by the City and forwarded to the Consultant for execution and return to the City. After review and approval of the Contract documents, the Consultant will be given the notice to proceed.

**Proposal Evaluation**

In order to be considered, a minimum of five (5) copies of the proposal plus and electronic version must be submitted. Proposals should provide a straightforward and concise presentation adequate to satisfy the requirements of this RFP. The consultant's proposal should emphasize a clear understanding of the project and the necessary resources to perform the intended work. Responsiveness to the RFP will be the principal basis for evaluation.

## **Exhibit J**

# **Paso Robles Groundwater Basin Management Plan**

**August 2, 2010 5:30-7:30**

**City of Paso Robles  
City Council Chambers  
1000 Spring Street**

## **Meeting Objectives:**

- Review results from BMO Workshops
- Review Annual Report
- Review Groundwater Level Monitoring Program
  - How to add wells to the monitoring network
- Review of Outline of Groundwater Management Plan

## **Agenda:**

5:30 – Introductions and GAC Meeting Overview

5:40 - Summary of BMO workshop results

6:10 – Groundwater Monitoring Program Overview

6:40 – Annual Groundwater Level Report Overview

7:00 – Groundwater Management Plan Overview

7:15 - Next Steps

7:30 – Meeting Adjourn



## **Exhibit K**

August 26, 2010

Mr. Jerry Snow  
California Department of Water Resources  
Division of Planning and Local Assistance  
P.O. Box 942836  
Sacramento, California 94236-0001

**Re: Quarterly Report #3: Request for Reimbursement  
Agreement No. 4600008331, Paso Robles Regional Groundwater Management  
Plan, Invoice No. 3**

Dear Mr. Snow:

Enclosed is the City of Paso Robles third Quarterly Report for the above-referenced project. This quarterly report and Invoice No. 3 indicates total consultant expenditures of \$77,956.46 for consultant services during the reporting period. The City of Paso Robles requests reimbursement of this expenditure. Please note that this amount reflects an adjustment of -\$51.73 in consultant expenses that are above the allowable per diem amounts called out in Exhibit H of the agreement. The appropriate consultant invoice has been redlined to reflect this adjustment. Enclosed is a completed Invoice Number 3, including documentation of payment to the City's Consultant, GEI Consultants.

Sincerely,

Christopher Alakel  
Water Resources Manager  
City of Paso Robles

Enclosures